

# Railroad Efficiency—An Inspired Merchant's View

"I do not know the method of drawing up an indictment against a whole people", said Edmund Burke. If anybody knew the method he could now draw up an indictment of the whole American people. Possessing a country with unequalled natural resources, having available all the means of production and distribution to provide themselves and a large part of the world with necessities, comforts and luxuries, they are still, 33 months after the collapse of the stock market, wallowing in the depths of the worst depression in history because they lack the brains, intelligence, courage and spirit of co-operation to drag themselves out. The railroads are in the worst condition because they have been the victims not only of their own mistakes, like other large industries, but also of almost every folly that the various classes of people could suggest, and that imbecile legislators and bureaucrats could give effect to.

At a time such as this it ill becomes men engaged in lines of endeavor that are free from government interference to throw stones at the managements of the railroads, which have been the principal victims of government interference largely because of the folly of business men. Probably there is no other kind of business in which economic wastes are so great as in retail merchandising, and therefore it is especially unbecoming for any retail merchant to lecture railroad men or anybody else. Experience within recent years has, however, afforded many striking illustrations of the fact that when a man, either owing to ability or fortunate circumstances, becomes "successful" in anything, he is likely to awaken suddenly to a realization that he is a universal genius, and that his views on everybody's business, and even on literature and art, of which before he was comfortably ignorant, have become important.

### And Now Comes Mr. Filene

An so it happens that it is a retail merchant, Edward A. Filene of Boston, who, having made a success at selling ribbons, cosmetics and diaper pins, has dis-

covered that the railroads are inefficient because they have no research department, and has broadcasted to the world his self-important views upon transportation. The railroads, he has said in a widely disseminated speech, "have been protected against the normal processes of evolution because they were quasi-monopolies and because of their favorite status as public utilities. The state and federal governments have regulated them at times against their desires; they have also saved them from the rigors of competition. As a result they have tended to stagnate. \* \* \* Railroads should have research departments at least equal with those of our big industrial enterprises such as General Motors, General Electric, and the American Telephone and Telegraph Company. But no railroad of today takes basic research seriously, judging by results. \* \* \* They are incompetent. The management is, for the most part, traditionally minded, and follows obsolete routine practices."

### The Record of Railway Efficiency

It would be interesting to know just when Mr. Filene thinks he took enough time from selling pink pajamas to become an authority upon transportation. The managements of the railways had to work during the decade from 1920 to 1930 under the handicaps of the most bureaucratic and restrictive regulation ever applied to any industry, and of the "rigors of competition" with other carriers which were aided by the state and national governments both with huge subsidies and complete freedom from regulation. Under these handicaps they made a record in improving their service, increasing their efficiency and reducing their operating expenses which probably will bear comparison with that made by any other industry, whether government aided and regulated or not. It would be safe to bet that the difference between the wholesale prices Mr. Filene pays and the retail prices he charges for merely buying and selling 80 per cent of his goods exceeds the total transportation costs included in his retail prices.

Mr. Filene contrasts unfavorably the progress of railway transportation with the progress of highway transportation. In 1930 about 34,000 people were killed and almost 1,000,000 injured in accidents on the highways. Highway transportation is at least wonderful as a means of controlling the growth of population. Between 1920 and 1930 the number of railway passengers killed declined from 229 to 61, or from one passenger killed for every 5,500,000 carried to one passenger killed for every 11,600,000 carried. The number of railway employees killed was reduced from 2,578 in 1920 to 977 in 1930, or from one killed out of every 805 employees to one out of every 1,553 employees. The average number of freight cars per train increased from 37 to 48, or 32 per cent. The average speed of freight trains per hour increased from 10.3 miles to 13.8 miles, or 34 per cent. The number of tons of freight moved one mile per train hour increased 48 per cent. The number of pounds of fuel consumed per 1,000 gross ton-miles was reduced 30 per cent. Loss and damage of freight was reduced 71 per cent. While crime was rapidly increasing throughout the country, the efficiency of railway police reduced pilferage and robbery of freight cars more than 90 per cent. The railways paid a slightly higher average wage per hour in 1930 than in 1920, and meantime reduced their annual payroll \$1,165,000,000. Their total operating expenses in 1930 were almost \$2,000,000,000 less than in 1920, or a reduction of about 30 per cent.

Did Mr. Filene know these facts when he made his speech? If so, he made a deliberately dishonest speech. If not, he made a deliberately ignorant speech. He had a great deal to say about the desirability of more transportation by highway. Perhaps, like many business men whose economic illiteracy is equalled only by their greed, he wants more highway transportation because the public taxpayer bears so large a part of the shippers' costs when he ships by highway, and none of them when he ships by rail.

#### Concerning Railroad Research

And how about railway research, of which Mr. Filene speaks so glibly and of which he knows nothing? Is anybody fool enough to believe that without research there could have been made as much progress in railroading as there was made between 1920 and 1930? Both Commissioner Joseph B. Eastman of the Interstate Commerce Commission and Mr. Filene hail from Boston, and in view of what Mr. Eastman has had to say about railroad research it is difficult to doubt that Mr. Filene learned all he doesn't know about the subject from Mr. Eastman. The railroads have done much research work for themselves, but what many of those who discuss this subject do not know is that the railroad industry actually is divisible into two parts—the railroads themselves, and the railway equipment and supply manufacturing industry—and that almost every railway manufactur-

ing plant is a research plant for the railways. Safety and accident-prevention campaigns among the employees have been a large factor in the remarkable performance of the railways in reducing accidents, but who will say that this improvement, so greatly in the interest of the railroads and the public alike, could have been achieved without locomotive and car equipment, track, signals and operating methods which conformed to safe practices, and most of which have been developed at some stage or other in a laboratory and subsequently subjected to the acid test of road service? The records of railway efficiency and economy above mentioned could never have been attained without the aid of modern motive power equipped with fuel-economy and capacity-increasing devices and improved car equipment, roadway and signals.

If the railroads have seemed slow to adopt new developments in certain instances, it must be remembered that they are subject to the limitations of national interchange of equipment, and, in general, can not apply partially-tested devices for one year and, if found unsatisfactory, discard them on next year's model. The most intensive kind of highly-specialized engineering research by manufacturers' organizations has been employed in the development of the improvements in equipment and facilities. The railroads, themselves, through organizations such as the American Railway Association and the American Railway Engineering Association, have employed the best available engineering talent of universities and industrial research groups in the solution of such specific railroad problems as the determination of stresses in track, the detection of transverse fissures in rail, the requirements of adequate power-brake apparatus, draft gear equipment, automatic train-line connectors, etc., to meet modern operating requirements.

#### What Is "Research"?

The term "research" has become somewhat loosely associated in the public mind with almost any kind of investigation or survey to establish the facts pertaining to a particular problem, but those who advocate a strong centralized research organization for the railroads usually have in mind a staff of engineering specialists equipped with the laboratory facilities to undertake to answer any technical problem which might be presented by the railroads as a whole, acting through the American Railway Association.

The reasons why such an organization would be impracticable are plain. The railroads are primarily users, and not producers, of materials and supplies, which come from practically every branch of industry, and an organized attempt at railroad research covering the entire field would obviously be a tremendous undertaking, would involve needless duplication of effort, and would almost preclude the prompt consideration and solution of any one specific problem. As pointed out by M. J. Gormley, executive vice-presi-

dent of the American Railway Association, in recent addresses, railroad interests will best be served by confining centralized research activities to the investigation of specific problems requiring united action as these problems arise. Manufacturers' research facilities and the laboratories of engineering schools can provide, as they have in the past, a valuable supplementary source of information in the solution of railroad problems.

The nation is confronted with an extremely serious transportation problem because it has recklessly invested many billions of dollars in unproductive highways and waterways, is allowing them to be used largely at the expense of the taxpayers without regulation, and is, at the same time, collecting heavy taxes from the railways and so regulating them that they cannot effectively strike back at their subsidized competitors. The nation has this transportation problem confronting it because, for more than a quarter century, it has accepted the transportation views of inspired dry goods merchants, subsidy seekers and economic quacks instead of the transportation views of men who have had experience in the railroad business and have actually studied the technical and economic problems of transportation.

#### Filene—or Amos and Andy?

A few years ago the public was acclaiming Henry Ford as a transportation wizard because it was widely heralded that he had converted the Detroit, Toledo & Ironton from a bankrupt streak of rust into a railroad mint. Mr. Ford entered the railroad business like a lion, and retired from it like a lamb because he found that, after having become a billionaire in making cheap automobiles, he could not successfully run even a small railroad as long as the Interstate Commerce Commission could get him indicted if he ran it as he saw fit. Now we have a Boston stuffed prophet appearing in the guise of a dealer in ladies' step-ins to tell the public that after it has invested about 40 billion dollars in highway transportation within ten years it is broke because it has not spent enough on highway transportation, and inviting railroad men to step up to his lingerie counter and learn from him. And probably the American people will listen to him. They rarely listen to anybody who talks about anything that he knows anything about. If they did they might get out of the depression, and God knows they don't want to do that.

As we have now heard from Mr. Filene, why not get the views of Amos and Andy on the transportation problem? They are even more successful in their line than Mr. Filene is in his, and therefore have more reason than he for considering themselves authorities on everything. As authorities on transportation they have only one disadvantage as compared with Mr. Filene—they know something about it because of their long experience in operating the Fresh Air Taxicab Company.

## Car Retarders Under Present Conditions

As set forth in detail in an article in the *Railway Age* for August 1, 1931, page 160, car retarders are recognized as not only expediting the movement of traffic through classification yards, but also as reducing operating expenses from 18 to 40 cents per car in those yards where they are applicable and when normal traffic is being handled. These savings total from 25 to 40 per cent annually on the cost of the installation. The question now arises as to whether retarders will effect enough savings during periods of light traffic to justify the continuation of their operation, and if so, whether the saving will be large enough to meet the interest on the investment for their installation. This question has been answered by experience.

As an example, as traffic continued to decline during 1931 one road decided to discontinue the operation of the retarder system in a large yard and to operate it with car riders and switchmen. However, it was only a short time until it was readily apparent that not only was the operation unsatisfactory, but operating costs were actually higher. The retarders were, therefore, returned to service.

Again, in the Pitcairn yard of the Pennsylvania near Pittsburgh, Pa., the volume of traffic gradually decreased from a daily average of 1,800 cars, when business was good, to a low level of 603 cars in March of this year. With this decreased traffic and with the increased efficiency of the yard as equipped with retarders, it has been possible to confine the operation to one trick. Furthermore, even if it were practicable to revert to car rider operation and to handle the present traffic with one trick, this would require 18 car riders, resulting in an added charge to operating expenses of \$80 per day, or \$29,200 annually. This latter amount of money is equivalent to a return of at least 10 per cent on the cost of equipping such a yard with retarders and even if an equal amount (a liberal estimate) should be spent to rearrange the switch leads, etc., the saving would still be 5 per cent on the total investment for the entire improvement.

As a third example, a study of the Sharonville classification yard on the C. C. C. & St. L. showed that if the retarders had been cut out of service during March, when an average of 643 cars were classified daily, full-time operation would have been required and the operating costs would have been at the rate of \$83,932 annually, including \$52,833 for wages, \$30,149 for engine costs and \$950 for the operation of a motor car for hauling riders back to the hump. However, with car retarders in service, it was practicable to handle the 643 cars daily in two split tricks, with operating costs for a year of \$66,618, including wages, engine costs and car retarder maintenance, as well as taxes and depreciation on the retarder system. Thus



the annual saving being effected by the retarders with even the present light traffic is \$17,314 annually. Furthermore, the retarders have so expedited classification that the delay time has been reduced sufficiently to effect an estimated annual saving of \$7,168. Likewise, the retarders have caused reductions in car damages and in personal injury claims which, based on previous experience, are each estimated to total \$1,750 annually, so that the annual saving from these intangible items amounts to \$10,668, thus bringing the total annual saving to \$27,982.

It should be evident from the above that retarders are not to be considered as merely a fair-weather proposition, but rather as a facility that will not only earn an attractive return in normal times, but will pay its way under such abnormal conditions as those now prevailing.

## Two British Roads to Pool Competitive Revenues

With the object of eliminating "wasteful competition in the provision of railway services in order to secure the utmost economy of expenditure consistent with reasonable public requirements," the London, Midland & Scottish and the London & North Eastern have submitted to the Ministry of Transport of Great Britain a proposal for "a pool of the railway traffic receipts of the two companies to be earned by them between points where they are in competition."

The pooling plan, unquestionably one of the most important steps taken by any of the British railways since their amalgamation into four major systems in 1923, was referred for consideration to a special committee appointed by the Minister of Transport, so that a decision concerning it might be reached by July 1, when it was scheduled to go into effect.

Some idea of the large scale upon which the proposal is drawn may be gained from the fact that the territory served by the two roads includes, roughly speaking, that part of England north and east of a line from London to Liverpool, as well as all of Scotland. Over much of this region they are highly competitive; at many of its important cities they offer the only existing railway services.

Except for certain points served by one of the two participating companies over routes so indirect as to preclude any real competition, the pool will affect all stations at which the L.M.S. and the L.N.E. are in any way competitive; and it will include all classes of traffic with the exception of mail and any intra-London passenger services which may be separately pooled under the London Passenger Traffic Bill.

The pooled traffic will be divided into eight general classes, under each of which will be determined the total revenues for each company between all competitive points for the years 1928, 1929 and 1930; in

future years the combined revenues between such competitive stations will be divided between the two railroads in proportion to the three-year average. By thus dealing with each class of traffic as a whole the expense of maintaining separate pools for individual services, such as those between London and Edinburgh, will be avoided; while the comprehensive basis of the plan will leave traffic free to flow by the natural economic route in cases where competition between the two companies is not now strictly comparable, because of differences in terminal locations, train services, etc. It is not anticipated that there will be any marked change in the proportions of the total pooled traffic carried by the respective companies, but to provide for this contingency each company may deduct from its gross revenues, prior to pooling them, allowances for "terminals and cartage in respect of the work done other than rail conveyance," and for "expenses framed to meet only those train operating costs which vary with traffic volume."

In outlining the advantages of the plan, an explanatory memorandum issued by the railways says:

With this pooling of receipts the companies will be enabled gradually to effect appreciable economies in the provision of capital and in working expenses, as there will be a unity of interest in all the many streams of traffic concerned. The resources and equipment of both companies can be used for their common interest between places where their interests are now divergent, and apart from the avoidance of outlay on duplicate services, economies will inure in respect of advertising, town office arrangements, canvassing, cartage work and other outlay which accompanies competitive services.

As regards the public interest, the scheme will not affect rates, which are on a common basis. Indirectly, however, the results will tend ultimately to reduce the level of rates by reducing the existing margins between the standard revenues contemplated by the Railways Act of 1921 and the actual net revenues.

In addition, the scheme will permit the introduction of inter-availability of tickets between the places affected.

A further public advantage hoped for will be the simplification and eventual solution of the difficult question of joint lines.

Further, the public interest will be well served by the contribution which the scheme will make to aid the difficult financial position of the two companies. Although it is most difficult to hazard an estimate of the effect, any measure which relieves the companies' financial position without impairing, but on the contrary probably improving, the efficiency of their service, is in the national interest.

Both from its nature and its extent the L.M.S.-L.N.E. plan goes far beyond anything of the kind yet attempted in this country. "To hazard an estimate as to the effect" is assuredly "most difficult." Yet it is safe to assume, as a foregone conclusion, that tremendous advantages will accrue to both participating companies. With this in mind, and with the knowledge that the Interstate Commerce Commission has intimated its possible readiness to approve some forms of pooling, American railway men will watch with interest the development and operation of the British pool. A similar plan is doubtless applicable to many competitive situations in this country. In some such plan may be found an effective method, not only of offsetting some of the losses in gross revenues due to the depression, but also of meeting more successfully unfair and government-subsidized competition.





The Combination Station at Hydeville, Vt., Replaced by a Shelter Shed

## D. & H. Has Abandoned 421 Buildings in 10 Years

Numerous water tanks and turntables also removed in program resulting in large economies

**F**OLLOWING a definite policy of ridding its property of buildings and other structures which have become unessential through changing conditions of one character or another, and therefore liabilities rather than assets, the Delaware & Hudson has abandoned and removed about 421 of the 1,835 buildings on its property during the last 10 years, including 40 passenger stations of different character and size, 381 buildings of a miscellaneous nature from box-car tool houses to enginehouses, and a considerable number of other structures, such as water tanks, stock pens and turntables. With the decision to abandon each structure based on an independent and thorough study of the conditions involved, including the effects on any phase of operation or maintenance and the needs of the public, these structures have been removed without loss or inconvenience to the railroad and, in most cases, with distinctly beneficial results.

It was in 1922 that a definite policy was established contemplating the removal from the right-of-way of all buildings that were not fully justified or essential. The number of buildings removed each year since 1922 has varied widely, owing primarily to the uncertain conditions in this period, both as regards passenger traffic and certain classes of freight traffic. In 1922 and in 1923, 15 buildings of a miscellaneous character were removed; in 1924, 1 passenger station and 30 miscellaneous buildings were removed; and in 1925, 1 passenger station and 37 more miscellaneous buildings were taken down; and in 1926, 3 more passenger stations and 36 additional miscellaneous buildings were disposed of. In 1927, a study of conditions led to the removal of 95 miscellaneous buildings and, in 1928, when 65 more miscellaneous buildings were disposed of, 17 passenger stations, considered unnecessary, were closed and removed. Continuing this work, 6 additional stations and 30 other buildings were abandoned in 1929, 7 stations and 55 other structures were taken out of service in 1930, and 5 stations and 18 miscellaneous buildings were done away with during 1931.

The size and character of the stations and other buildings removed have varied widely, these factors being given little weight if it is determined that a build-

ing is no longer needed or justified. Thus, a review of the records shows that the buildings removed range from simple shelters to two-story combination freight and passenger stations, with book values ranging from a few hundred dollars or less to as much as \$30,000.

The accompanying illustrations show some of the stations removed which, in many respects, are typical of other stations which have been abandoned and dismantled. The station at Hydeville, Vt., which was torn down in September, 1930, was a frame structure 112 ft. long by 20½ ft. wide. This station, which housed both passengers and freight facilities, was constructed in 1850 and had a book value of \$5,500. The relatively small stations at Cooperville and Harkness, N. Y., were also removed during 1930.

### Study Given to Retirements

The program of building retirements for each year is based largely upon investigations made during the general inspections of the property each spring and fall by the vice-president and general manager and his staff. In many cases buildings are removed upon the recommendation of the departments concerned, after they have found that the facilities are no longer required or that they can find equal or more suitable quarters elsewhere.

The removal of passenger stations, which requires the sanction of the Public Service Commission of the state concerned, takes place only after a thorough study has shown that public convenience and necessity do not require them. With the decreasing passenger traffic in recent years, there has been little difficulty in establishing this fact in many cases. At certain points where it was deemed desirable to retain a station stop and some form of protection for those who might board and leave trains occasionally, shelters have been provided, representing only a small fraction of the outlay involved in the existing station facilities. Such was the case at Hydeville, where the station building was replaced by a small shelter. Freight at these points is now handled direct from cars on old station tracks retained, or is taken care of at the nearest point where freight-handling facilities are provided.



New Station at Merriam, N. Y., Which Replaces Old Nearby Stations at Wadhams and Whallonsburgh

Miscellaneous buildings have been abandoned for a large number of reasons. In many cases terminal buildings, such as sand houses, blacksmith shops, welder's shanties, oil houses, yard offices and electrician's shops have been found unnecessary. In other cases it has been found that more suitable quarters for the purposes could be had in other existing buildings where adequate space was available. In certain cases the abandonment of shop buildings has been the result of the removal of shop facilities to another point, as was the case when much of the shop work carried on at Carbondale, Pa., was transferred to Oneonta, N. Y., and in still other cases, buildings have been made unnecessary by the consolidation of scattered work.

A number of section tool houses have been removed by providing adequate facilities in the freight house sections of combination passenger and freight stations.

been abandoned has varied, but generally the buildings are razed and all serviceable material is salvaged. In some cases the buildings are sold to parties who remove them from the right-of-way. Such was the case at Cooperville, N. Y., where the small station building, which was rebuilt in 1924, was sold to a man who removed it for erection elsewhere as a gasoline filling station. At Round Lake, N. Y., the local freight house was sold to the Round Lake Community Association and the railroad was thereby able to realize something on a facility which was no longer required.

The economies resulting from the abandonment and removal of buildings have been many. Possibly the largest item has been in upkeep. In this connection, 679,660 sq. ft. of exterior and interior painted surface has been eliminated since 1922, or almost equivalent to the painting required on the Champlain division of the road. In 1929 and 1930 alone, the painting work on the road was reduced by 165,163 sq. ft. of painted surface. It is estimated that the total reduction in painted area has resulted in a saving of approximately 2,700 man-hours annually, which amounts to a total saving of approximately \$5,165 a year in labor and material costs, considering two coats, with the necessary cleaning of structures where required.

In addition to the large saving made annually in building maintenance by the removal of unnecessary buildings, the removal of certain stations and pumping plants has done away with the expense of agents and operators. The cost of heat and light has also been saved at many points. Insurance costs have been cut or wiped out, and, while less tangible, the consolidation of many shop facilities into larger and more centrally located buildings has resulted in less lost motion of employees and better supervised work. In addition to these advantages, the removal of many of the



The Small Station at Cooperville, N. Y. (Above) Was Abandoned in 1930 and Sold for Use as a Gasoline Filling Station. Left—New Station Completed Recently at Lacolle, Que., Provides Space for Emigration Offices, a Storehouse and Section Headquarters

This has been true particularly on the Susquehanna division, where a once thriving hop growing industry has almost come to a standstill, making available for other purposes space in the relatively large freight house provided originally to handle shipments of hops and hop products. It has been possible to remove a number of water tanks and pump houses owing to the use of larger engine tenders, the building up of the more important water stations, the reduction in the number of local trains and the substitution of electrical pumping equipment for steam plants at many points.

The method of disposing of buildings which have

buildings on the D. & H. has resulted in a material improvement in the appearance of the right-of-way.

All of the work of disposing of abandoned buildings has been carried out by the bridge and building forces of the D. & H., under the general direction of H. S. Clarke, engineer maintenance of way.

THE EXPOSITION FLYER of the New York Central, which carried eastern passengers to the World's Fair in 1893 in Chicago, re-appeared on June 26 for regular service between New York and Chicago, when the revived name was applied to the North Shore Limited.



# R. R. Motor Operations Reviewed

Recover traffic, reduce costs, say annual reports—Proposal to use Railway Express Agency for collection and delivery grows in favor

THE increasing attention being given by railroads to the development of co-ordinated rail-highway freight services in their efforts to meet the competition of independent truck lines is evidenced in the annual reports of the carriers for 1931. Many executives, in these reviews of last year, coupled motor truck competition with the business depression in listing the principal reasons for recent major traffic declines. While some railway executives discussed the co-ordination of rail-highway passenger services as well, the great part of their annual report comments was concerned with the encroachments of the truck, and the co-ordinated freight services which are being developed to meet the situation. Some of the reports merely stated the problem and advocated the regulation of interstate motor carriers, but others went further and outlined measures which have been adopted in efforts to cope with existing competitive conditions. Excerpts from the motor transport discussions in some of the 1931 railroad reports are given herein.

## Sargent Would Have Express Agency Handle All L.C.L.

Fred W. Sargent, president of the Chicago & North Western, discussed the problem at length and advocated more intensive joint utilization by the railways of the existing organization and facilities of the Railway Express Agency. Mr. Sargent would expand the activities of the Express Agency to cover both the trucking of freight and operations as a freight consolidator and forwarding agency. In connection with the former proposal, he said:

Your management feels that transportation is in a transition period; that the use of the truck within certain distances and under proper conditions is here to stay, likewise the use of the bus. We have, therefore, inaugurated both truck and bus operations in certain localities where the same, during this transition period, can be made to pay. It would, however, be disastrous for each separate railroad to attempt to go into either the truck or bus business, to an extent sufficient in each instance to meet all demands for that class of service. Not only would this be disastrous from the standpoint of cost on account of operating separate trucks in destructive competition and cluttering the highways, but it would bring about a complete state of chaos in the transportation industry. It would also disrupt the existing established relationship between communities and industries and be exceedingly detrimental to the shipping public as a whole.

To meet this situation and at the same time take advantage of this new form of transportation in a systematic and consistent way, your management feels that the railroads should utilize the Railway Express Agency for the following: (1) To handle all less than carload freight; (2) to operate trucks on public highways where same is indicated as being more efficient and economical than the use of the railroad; (3) to handle all express and l.c.l. freight, and in some instances carload freight, in the transfer business in large cities and in terminals.

## Truck Bodies and Containers on P. R. R.

General W. W. Atterbury, in his annual report to the Pennsylvania stockholders, discussed that road's co-ordinated rail and highway motor transport operations as follows:

Mindful of the advantage and necessity of furnishing the type of service demanded by the public, and of adopting modern methods of transportation where they are found to

be economical and efficient, the company continues its policy of developing and co-ordinating rail and motor transportation.

On November 5, a new form of rail-truck operation—the "Demountable Truck Body"—was inaugurated between New York, Philadelphia and Baltimore, and between Baltimore and Richmond, Va. Under this arrangement truck bodies are loaded by the shipper, hauled by motor truck from his place of business to the receiving station of the railroad where they are transferred from the truck to railroad car and moved in railroad freight service to destination. Upon arrival at destination they are transferred from the railroad car to a motor truck and hauled to the consignee's receiving platform. This form of service provides a close working relationship between the trucker and the railroad, relieves the trucker of the terminal-to-terminal or road-haul transportation; obviates difficulties arising from unfavorable weather conditions, congested highways and irregular service; effects economies, since the cost between terminals is less by railroad than by truck over the highways, and offers a simplified plan for the determination of transportation costs. It combines the advantages possessed by motor truck operation in congested metropolitan centers with the advantages of economy and expedition in railroad line-haul movement. This service will be extended as rapidly as justified by the growth of traffic.

The company also further extended the service for less-than-carload freight through the use of portable steel containers so constructed that they can be carried upon either railroad cars or motor trucks. This service was inaugurated on your lines in 1928, to make available to patrons the advantages of co-ordination between motor trucks and the railroads, and to meet the needs of patrons who desired to be relieved of handling their shipments between railroads and their places of business. Shippers have found the containers of great advantage in loading small lots of merchandise not requiring an entire car, and the wide-spread demand for this service necessitated the acquisition of additional containers during the year. The container also has been utilized by the company to handle economically other less-than-carload freight. This service is now in operation upon your lines between the New York metropolitan area and the principal cities east of Pittsburgh, as well as between Pittsburgh, Buffalo, Cleveland, Chicago, East St. Louis and other important cities in the Middle West.

New types of equipment are constantly being developed to improve and attract traffic, and to reduce costs to the shipper and the railroad, such as covered hopper cars and metal containers for handling bulk cement, lime, etc., eliminating cost of bagging and packing; special containers for brick, and other improved devices.

The demand for bus service continues to increase, and, as announced in previous years, such service has been substituted to a considerable extent for unprofitable passenger train service. The company owns, through one of its subsidiaries, a substantial interest in the Pennsylvania Greyhound Lines, Inc., which company had a profitable year.

## S. P. Truck Subsidiaries Recover Traffic

Hale Holden, chairman of the executive committee of the Southern Pacific, after discussing the year's operations of the Pacific Greyhound Corporation and the Southland Greyhound Lines, highway passenger carriers in which the Southern Pacific is financially interested, had the following to say of co-ordinated freight operations:

The results of the operations during the year of the Pacific Motor Transport Company were satisfactory. As stated in last year's report, the Pacific Motor Transport Company was organized for the purpose of providing shippers and receivers of less-than-carload freight, in the territory served by your Pacific Lines, with store-door pick-up and delivery service in connection with rail station-to-station movement



of such traffic, the service being established to meet the competition of motor trucks. The volume of traffic secured by the Pacific Motor Transport Company during the year 1931 increased 438 per cent, over that for the year 1930. Its operations during the year have been substantially extended so that the service is now available quite generally throughout the territory served by your lines in California, Oregon, and Arizona. The operations are still intrastate in character, the question of filing tariffs with the Interstate Commerce Commission for handling interstate traffic still being under consideration.

In addition to its store-door pick-up and delivery service, the Pacific Motor Transport Company also owns and operates three highway truck lines serving as feeders to its rail operations. Early in the year 1931, a general attack upon the Pacific Motor Transport Company's method of operation was filed with the California Railroad Commission by the Association of Interurban Highway Freight Carriers. The attack was the subject of a series of hearings before the California Railroad Commission, which rendered a decision favorable to the company.

Service of the Pacific Motor Transport Company is increasing in popularity and the outlook is good for continued success in recapturing not only less-than-carload freight, but also much carload freight which has been lost to highway motor truck carriers.

In last year's report mention was made of the commencement of operations, on August 1, 1930, of the Southern Pacific Transport Company, organized for the purpose of providing shippers and receivers of less-than-carload freight, in the territory served by your Texas Lines, with store-door pick-up and delivery service in connection with rail station-to-station movement of such traffic. The full year's operations for 1931 were quite satisfactory, the number of stations in Texas at which such service is available having been substantially increased during the year. As stated last year, the service rendered by the Transport Company has proven popular and its operation has been valuable in meeting competition of highway motor carriers.

The service rendered by the Southern Pacific Transport Company has been limited, as indicated above, to territory served by your Texas Lines. In order to extend such service to territory served by your Lines in Louisiana, your company caused the Southern Pacific Transport Company of Louisiana to be incorporated on March 29, 1932, under the laws of the State of Louisiana. The new company commenced operations on April 16, 1932, and a substantial portion of the traffic heretofore lost to highway carriers is expected to be recovered.

#### New Haven's Co-ordinated Services Expanded

The 1931 operations of the New England Transportation Company, highway subsidiary of the New York, New Haven & Hartford, resulted in a net income of \$16,734, according to statistics included in the annual report of the parent railroad. While bus service revenues dropped \$218,795 as compared with 1930, the revenue from freight trucking services increased \$193,407. The New England Transportation Company, for 1930, reported a deficit of \$92,399.

In his general remarks, J. J. Pelley, president of the New Haven, said:

Motor vehicle operations, carried on principally by the New England Transportation Company, continued to expand. During the year, 34 new passenger coaches, 37 tractors and 58 trailers were added to that company's equipment. Further co-ordination of passenger and freight service with rail operations was established. As a result of these increased activities, the New England Transportation Company was able to maintain substantially the same gross revenue as in the previous year, and at the same time improve its net income.

In continuing our development of a co-ordinated system of rail and highway motor transportation, during the year two new through fast freight trains were placed in operation—one known as the "Speed Witch," operating between Boston, Mass., and Baltimore, Md., via the Hell Gate Bridge route, making the run of 425 miles in 15 hours; the other known as the "Maine Bullet," operating between Portland, Me., and New York, making the run of 331 miles in 12½ hours. By means of co-ordinated highway motor trucks, serving as feeders for these through trains, this fast freight service has been extended to practically every city and town in the territory served by the New Haven.

The motor trucks of the New England Transportation Company have also made possible the establishment of an "Accept Today—Deliver Tomorrow" service for the handling of less-than-carload freight. Under this plan overnight transportation is available to practically every point served by your company.

#### Give Public What It Wants, Says French

It is the view of President Edward S. French of the Boston & Maine that "if the railroads are to get back any of the business which has been lost to the trucks, or if they are to retain the business which they now have, they must be prepared to give and be permitted to give the public whatever type of service it demands, at rates commensurate with the rates charged by others in the transportation business." In this connection, Mr. French discussed the unfair advantages enjoyed by truckmen competing with the railroads and reviewed pending motor carrier regulation proposals. Continuing, he said:

In view of the difficulties in obtaining and enforcing adequate legislation to regulate motor carriers for hire, it seems probable that better results can be accomplished by obtaining such changes in the existing laws as may be necessary to permit railroads to engage in trucking operations subject only to the regulation imposed on other truckmen doing similar business, and to remove existing restrictions which prevent railroads from promptly adjusting rates to meet motor truck competition where it exists, and which prevent railroads from properly co-ordinating rail and highway service.

Continuing efforts are being made by your management to meet this competition by the use of the Boston & Maine Transportation Company, the railroad's motor subsidiary, by arrangements with forwarding companies and by the adjustment of rates. Further study is being given to the possibility of utilizing the Railway Express Agency for handling less-carload freight, and to the use of containers and truck bodies.

#### Highway Operations Save Money for Reading

The 1931 report of the Reading, prepared by the late Agnew T. Dice, lists the bus and truck routes of the Reading Transportation Company, the latter of which covered 349.9 miles at the close of the year. During 1931 the 185-mile New York-Harrisburg, Pa., and 107-mile New York-Philadelphia, Pa., truck routes were inaugurated in conjunction with the Jersey Central Transportation Company, highway subsidiary of the Central of New Jersey.

"The inauguration of motor truck lines by the Reading system," the report said, "is in the nature of an experiment to determine the practicality of a co-ordination of rail and motor truck service in the improvement of service to our patrons. No plans for a system wide co-ordinated service—part rail and part truck—have been evolved, but such a program may eventually be necessary."

In 1931 operations of the Reading Transportation Company resulted in a deficit of \$5,592, but the report in this connection explained that "the Reading Company was enabled to save many thousands of dollars through the substitution of an adequate motor coach and truck service for unprofitable train service on several of its outlying rail lines."

#### Store-Door Service Brings L.C.L. to D. & R. G. W.

J. S. Pyeatt, president of the Denver & Rio Grande Western, reports that "considering conditions prevailing generally through our territory, motor operations provided a fair return on its capital." During last year, this road organized the Rio Grande Transport Company to provide pick-up and delivery in conjunction with D. & R. G. W. freight train services in eastern Colorado. This service, the report says, has resulted "in a material

increase in less-than-carload freight traffic handled in this territory," and consideration is being given to the extension of the service.

#### Missouri Pacific and M-K-T

A change in the Missouri Pacific set-up in Arkansas took place during 1931, when pick-up and delivery service in that state, formerly performed by the Missouri Pacific Transportation Company, was taken over by the parent railroad. The highway subsidiary, however, continued to expand its passenger operations, several new bus route franchises having been acquired. These additions, the annual report of L. W. Baldwin, president, said, "extend motor coach operations in daily service to approximately 3,956 miles, the principal acquisition being the privilege to operate between Palestine and Houston, Texas."

"Truck competition has seriously affected our movement of cotton, livestock, automobiles and a growing list of other carload commodities," said M. H. Cahill, president of the Missouri-Kansas-Texas. He then called attention to reductions in railway rates, and added that "to further meet truck competition, we inaugurated, effective October 1, 1931, free pick-up and delivery service for the handling of l.c.l. merchandise between all points within a radius of 300 miles, which service is still in the experimental stage. Laws regulating truck operations enacted in the state of Texas during 1931 are proving helpful to the rail lines."

#### New Maine Central Subsidiary

The Maine Central, during 1931, found its highway services had grown "to an extent that makes it desirable to operate this service by a separate company devoted exclusively to highway motor transportation." Accordingly, the bus and truck operations conducted by that road's hotel subsidiary, the Samoset Company, were transferred to the Maine Central Transportation Company. At the close of the year highway operations of this road, all in the state of Maine, included lines between Portland and Bangor, Portland and Lewiston, Lewiston and Brunswick, Ellsworth, Waukeag and Bar Harbor and Bangor and Bucksport. "These highway operations have allowed the railroad company to make substantial savings in expense of its rail and steamer operations," said President Morris McDonald.

The annual report of the Belt Railway of Chicago revealed that this road has installed truck service in lieu of ferry car operation for a number of road haul lines which it serves. This substitution, the report continued, "expedited the movement of business out of Chicago by one day. At the close of the year, about one-half of our l.c.l. business was being handled from our two stations to the freight houses of the trunk lines by motor trucks."

THE PIONEER REAL ESTATE COMPANY, Buffalo, N. Y., real estate subsidiary of the Lehigh Valley, has recently taken over the Starrett Investment Corporation's interest in the 19-story Starrett-Lehigh building, erected last year on the site of the railroad's Manhattan freight yard, between West Twenty-sixth and West Twenty-seventh streets and Eleventh and Thirteenth avenues, New York. Its increasing importance as a terminal and a desire to insure its permanence as such on Manhattan Island were responsible for the acquisition of the new structure by the railroad subsidiary, according to the statement of sale. A description of the building, which is designed for general industrial purposes, with railroad tracks and terminal facilities on the street floor, was published in the *Railway Age* of July 12, 1930, page 90.

## Reports on Automatic Train Control

THE Bulletin of the International Railway Congress for May includes (pages 705 and 811) reports prepared for the Twelfth Congress of the Association, to be held next year at Cairo, Egypt, on automatic train control; the first by D. H. Crook, of the Great Western Railway of England and the second by W. Stackel of the German State Railway.

#### America and Great Britain

Mr. Crook includes, besides well-known systems now in operation, brief descriptions of the "Reliostop"; Boulton's magnetic inductive scheme, tried in England as far back as 1893, and the Strowger-Hudd system recently tried on the Southern, of England. There is also a brief essay on principles, and a list of British patents, a dozen or more, issued prior to 1875.

Then follow 25 pages of illustrated descriptions of well-known systems: the mechanical type, (used on city and suburban lines), the General Railway Signal Company's intermittent inductive, the Union Switch & Signal Company's continuous inductive, and the Great Western (England) system. The latter is the only important one of long standing which is in use outside the United States. This latter was described and illustrated in the *Railway Age* of January 17, 1931.

Supplementing this earlier description, the present report reads in part:

"The system is applicable to single lines on which the ramp for a distant warning in one direction becomes inapplicable in the reverse direction of running. This condition has been met by energizing the inapplicable ramp with positive instead of the usual negative current. A polarized relay is introduced on the engine and whichever way this operates it suppresses the danger signal; but positive current does not ring the bell. The ramp is thus reduced to what is known as a neutral state.

"In the early equipments when the whistle sounded, the word 'danger' appeared in an indicator and the bell continued ringing until acknowledged by the driver. The visual indication of 'danger' has now been omitted and the addition of a slow-release relay, giving a short ring for about one second, has obviated the necessity for acknowledgement as each clear signal is passed. The standard position of the ramp on the Great Western is 440 yards before reaching single-arm distant signals, this to give the driver the automatic warning at the point at which the distant signal may be expected to be sighted.

"Some of the principal claims for the Great Western system are that there is no movable apparatus on the track and that the permanent current in the engine apparatus renders the system self-detecting against failure. The tendency of all failures is to give the warning signal, and even if this is not intended it is an error on the side of safety. The danger signal does not depend upon contact and the reception of electrical current."

The report ends with a list of 12 questions concerning the best methods of perfecting automatic train control, to be submitted for discussion at the Congress.

#### Automatic Train Control in Germany

Mr. Stackel describes three systems: the mechanical train stop which is in use in Berlin and Hamburg, Ger-



many, on city and suburban lines, 201 miles of track; an electro-inductive train control—a system termed the "Indusilor," which is in operation on 726 miles of line in Germany; and the Optical train control, which is in operation on 119 miles. These three systems have respectively the following numbers of motors or locomotives equipped, 1570; 125; 4. Except for the lines on the Berlin and Hamburg city systems everything is termed experimental, "a large scale experiment," the cost of which is borne by the German Railway. Locomotives equipped with the Indusilor have, however, been in use for a number of years in regular service. Construction and operation, both as to the Berlin and Hamburg systems and the "Indusilor" system are described at great length. The optical system, designed by Dr. Baseler, has been experimented with extensively. To avoid possible difficulties with the operation of the signal by uncontrolled diffusion of daylight, the light from the projector is artificially given a special character. By the use of a small wind vane connected to the compressed air pipe of the locomotive a revolving perforated disk is made to cut up the outgoing light into 600 separate pulsations per second; and by a simple artifice this is made to produce an effect different from that of simple light. Dr. Baseler's optical system, of which the selenium cell is the distinctive feature, was described in the *Railway Age* of March 16, 1929, page 634; also in *Railway Signaling* for June, 1929.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE freight car loading in the week ended June 18 amounted to 518,409 cars, an increase of 16,649 cars as compared with the week before, after an almost steady decrease since March. This was, however, 220,685 cars less than were loaded in the corresponding week of last year and 402,236 cars less than in 1930. Small increases as compared with the preceding week were shown as to all classes of commodities except l.c.l. merchandise, which showed a small reduction. Miscellaneous loading showed an increase of 12,728 cars. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

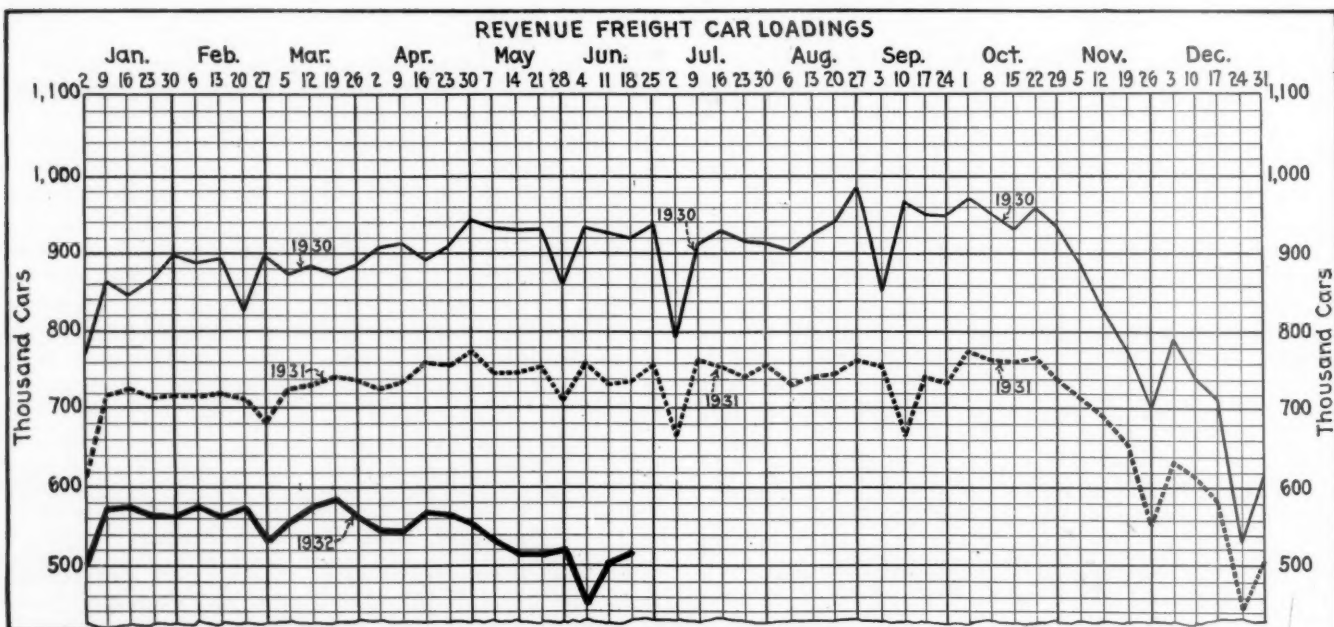
### Revenue Freight Car Loading

Districts	1932	1931	1930
Eastern	118,895	162,272	205,236
Allegheny	99,407	146,440	189,189
Pocahontas	30,515	46,940	51,777
Southern	75,228	109,237	123,497
Northwestern	61,790	104,845	149,052
Central Western	83,591	107,424	129,888
Southwestern	48,983	61,936	72,006
Total Western Districts	194,364	274,205	350,946
Total All Roads	518,409	739,094	920,645
Commodities			
Grain and Grain Products	25,873	32,771	39,697
Live Stock	15,360	19,549	21,325
Coal	68,603	109,331	132,497
Coke	2,941	5,451	9,334
Forest Products	17,140	30,555	49,637
Ore	4,290	30,640	63,193
Mdse. L.C.L.	175,925	217,136	240,756
Miscellaneous	208,277	293,661	364,206
June 18	518,409	739,094	920,645
June 11	501,760	732,409	926,066
June 4	447,387	761,084	935,582
May 28	520,962	711,249	860,064
May 21	515,450	754,738	929,606
Cumulative total, 24 weeks	13,124,072	17,593,492	21,488,131

### Car Loading in Canada

Total car loadings in Canada for the week ended June 18 amounted to 44,737, an increase over the previous week's loadings of 1,051 cars. With the date of expiration of the bonus of 5 cents per bushel on wheat extended to June 30, grain loading in the west continued heavy amounting to 7,916 cars as against 7,521 cars for the previous week and 7,143 cars for the twenty-fourth week last year. The United States additional tariff of \$3 per M. on soft wood lumber effective midnight June 20 greatly stimulated the loading of lumber, to get all orders possible across the border before that date. The increase in loadings for the Eastern Division from 27,095 cars for the previous week to 27,436 cars was only slightly more than the usual seasonal increase, and the index number rose from 63.28 to 63.29. In the Western Division the increase from 16,591 cars to 17,301 cars raised the index number from 85.21 to 89.18 which was a new high for this year.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada		
June 18, 1932	44,737	18,004
June 11, 1932	43,686	17,640
June 4, 1932	42,614	16,239
June 13, 1931	52,255	23,474
Cumulative Totals for Canada		
June 18, 1932	999,556	496,408
June 13, 1931	1,156,498	667,401
June 14, 1930	1,404,052	860,007





# A. S. T. M. Meets at Atlantic City

Many subjects relating to material specifications and tests are discussed at four-day meeting

THE thirty-fifth annual meeting of the American Society for Testing Materials was held at the Chalfonte-Haddon Hall, Atlantic City, N. J., on June 20 to 24, with 674 members and guests in attendance. Little affected in character or scope by present economic conditions, the program of the meeting, as in the past, embraced a large number of special committee meetings and 16 general sessions at which more than 100 committee reports and papers on material specifications and tests were presented.

The general sessions of the meeting were, for the most part, presided over by O. F. Clements, president of the society and technical director of the General Motors Research Laboratories, assisted by C. L. Warwick, secretary-treasurer. In the election of officers, Cloyd M. Chapman, consulting engineer, New York, was advanced to president of the society, and W. H. Bassett, metallurgical manager, American Brass Company, was elected vice-president. The Edgar Marburg lecture this year was given by Prof. Hugh S. Taylor, Princeton university, on the subject, "Fundamentals in the Problem of Resistance to Deterioration", and the Charles B. Dudley medal was awarded to C. A. Menzel, associate engineer, research laboratory, Portland Cement Association.

## Cement and Concrete Receive Much Attention

Eight reports and papers were presented on cement, concrete and allied subjects. The Committee on Cement presented revisions of the society's standard methods of testing cement, and of the Manual of Cement Testing, and recommended the withdrawal of the tentative specifications and tests for compressive strength of portland cement mortars. It also proposed new tentative specifications and tests for masonry cement, which it considered of special importance because of the increased interest in this type of cement, and included in its report a detailed discussion of the effect of the temperature of cement at the time of its use. It was pointed out that the data studied in connection with this latter subject present opposite viewpoints, and emphasized, therefore, the need for those interested in the purchase of cement to study all conditions, beside hot cement, which tend to produce hot concrete.

The Committee on Concrete and Concrete Aggregates recommended minor revisions in four standards and three tentative standards and suggested in detail a procedure for carrying out freezing and thawing tests of concrete and aggregates. The committee reported that its new Subcommittee on Ready-Mixed Concrete has prepared specifications covering the materials, proportioning, mixing, delivery, inspection, testing and acceptance of ready-mixed concrete for all purposes.

In a paper on Tests on Consistency and Strength of Concrete Having Constant Water Content, Inge Lyse, research assistant professor of engineering materials, Lehigh University, presented test data which showed that the consistency of concrete remains nearly constant, regardless of the richness of the mix, if the type and gradation of the aggregates and the water content per unit of fresh concrete remain constant. The

conclusions presented as a result of the study on which the paper was based pointed out that the cement is the strength-giving element in concrete; that above a given minimum number of cement particles necessary to give workability and binding strength to the concrete, the strength increases in direct proportion to the increase in the number of cement particles in a unit of water; and that for ordinary aggregates, a change in the richness of a concrete mix of a given consistency is accomplished by keeping the water content constant and substituting 0.85 lb. of aggregate for each pound decrease in the cement content, or vice-versa.

## Early-Strength Concrete Studied

R. E. Dawley, associate professor of applied mechanics, Kansas State College of Agriculture and Applied Science, Manhattan, Kan., presented a paper on Volume Changes of an Early-Strength Concrete, prepared as the result of a study of the changes in length accompanying changes in the temperature and moisture content of concrete specimens of various mixes and consistencies when made with ordinary portland cement and when made with a certain early-strength portland cement.

Some of the conclusions arrived at as a result of the study made are given in the following:

The early-strength cement produced stronger concrete than the ordinary portland cement in equivalent mixes at ages of 3 and 28 days.

The water-cement ratio-strength relation for the early-strength cement is of a different character from that of ordinary portland cement.

The coefficient of thermal expansion proved to be affected more by the kind of coarse aggregate used than by the kind or amount of cement.

The coefficient of moisture expansion increased with an increased cement content. Wet mixes (7-in. slump) absorbed more water than dry ones (2-in. slump).

Limestone concrete specimens absorbed more water than sandstone specimens.

Specimens made with the early-strength cement absorbed less water than those made with ordinary portland cement.

Freezing-and-thawing tests indicated that specimens made with the early-strength cement were more durable than those made with ordinary portland cement.

In a paper by R. E. Davis, professor of civil engineering, and R. W. Carlson, research engineer, University of California, a new electric strain meter was described with details of its use in measuring internal strains and temperatures in mass concrete. This strain meter consists essentially of a small framework containing resistance coils of wire under tension, which is embedded in the concrete and connected to a measuring unit outside. It is said that the apparatus is sensitive to changes as small as one millionth of an inch per inch.

## Many Reports on Iron and Steel

A large number of reports were presented on steel and iron and other ferrous and non-ferrous metals. Tentative revisions were recommended in a number of existing standards, one of the most important being the revision of the process clauses of the various steel specifications, including those for bolts and spikes and

other track materials, by the addition of the word "acid", in referring to the Bessemer process. In proposing this change the committee pointed out that little basic Bessemer steel was ever manufactured in the United States and that, in reality, the specifications have reference specifically to acid Bessemer steel rather than basic Bessemer steel.

Three new tentative standards were proposed by the Committee on Steel, these covering specifications for structural medium steel, for structural rivet steel and for electric-fusion-welded steel pipe. The principal feature of the new specifications for structural medium steel is a tensile strength of 60,000 to 72,000 lb. per sq. in., called for as the result of a considerable demand for a higher strength steel for heavy construction.

Owing to the lack of use of the standard specifications for extra-high-carbon steel splice bars, the committee recommended that these specifications be discontinued.

The Subcommittee on Spring Steel and Steel Springs reported that the tentative specifications for heat-treated carbon-steel helical springs had been submitted to the Committee on Specifications of the American Railway Association for approval, and that for the time being these specifications should be continued as tentative. The Subcommittee on Steel Tubing and Pipe reported that as the result of a request from the Boiler Code committee of the American Society of Mechanical Engineers, the standard specifications for lap-welded and seamless steel and lap-welded iron boiler tubes had been revised to provide higher tensile strength for such tubes, and the Subcommittee on Boiler Steel reported that it is investigating the demand for and the material and properties necessary for a steel of higher tensile strength for boiler and fire-box requirements.

#### Steel Castings Studied

Steel castings were given major consideration in a symposium presented before a joint meeting of the society and the American Foundrymen's Association on Tuesday afternoon and evening. This symposium covered a general survey of the steel castings industry; the design of castings; purchase requirements for castings; physical and mechanical properties of cast steels; properties of cast medium pearlitic steels; castings of corrosion-resistant steels; austenitic manganese steel castings; heat treatment of steel castings; fusion welding of steel castings; and casting production in the United States, which showed that the consumption of commercial steel castings by the railroads in 1929 was 191,003 net tons, or about 40 per cent of the total consumption by all industries in the country for that particular year.

The Committee on Cast Iron presented proposed tentative specifications for cast iron culvert pipe, and also a complete revision of the standard specifications for gray iron castings, while the Committee on Wrought Iron recommended, among other things, that revisions in the standard specifications for staybolt, engine-bolt and extra-refined wrought-iron bars, accepted as tentative in 1931, be continued as tentative. This latter committee reported that it is now engaged in preparing specifications for wrought-iron rivets, and that a study of the effect of elevated temperatures on the physical properties of wrought iron is also under consideration.

#### Corrosion and Preservative Coatings

The report of the Committee on Corrosion of Iron and Steel was made up largely of progress reports on the long-time corrosion tests on plates which the committee has been conducting at Annapolis, Md., and the

total immersion tests in sea water being conducted on plain and riveted steel plates and copper-steel pipe at Portsmouth, N. H., Key West, Fla., Washington, D. C. and Port Arthur, Tex. The committee recommended tentative revisions in six standard specifications for zinc-coated iron and steel products, including telephone and telegraph line wires, tie wires, railroad right-of-way fence, chain-link fence fabric galvanized after weaving, barbed wire and wire strand. The Subcommittee on Metallic Coatings reported that its tests indicate that at any location the durability of a zinc coating is substantially proportional to the weight of the coating. The Subcommittee on Metal Culvert Tests reported that because of present economic conditions and the magnitude of the work involved, its activities have been suspended temporarily.

A large number of recommendations were made by the Committee on Preservative Coatings for Structural Materials, these covering specifications for the manufacture, composition and testing of paints, paint oils, pigments and leads, varnishes, shellac and allied products. Many changes were recommended in the present standard methods of analysis of paint materials.

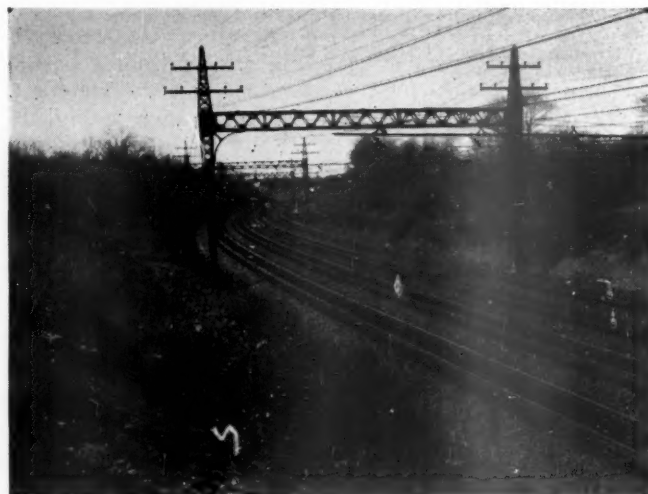
#### Timber

The Committee on Timber reported that it had devoted considerable study to the society's original specifications for piles with the view of suggesting changes, and furthermore, that it had reconsidered at length the standard specifications for structural wood joists, planks, beams, stringers, posts and timbers. New creosote correction tables were presented with the recommendation that they be published as a tentative standard separate from the society's present standard on Methods of Sampling and Analysis of Creosote Oil.

#### Drain Tile

The Committee on Drain Tile reported progress in its studies of loads on pipe in wide ditches and on the durability of concrete drain tile in alkali and peat soils. It pointed out that a 10-year examination of field specimens of concrete in alkaline soils and waters, made in 1931 by the Portland Cement Association, indicated that properly made and cured concrete is suitable in all alkali areas except where sulphate concentrations are abnormally high. Many phases of the subjects of coals, petroleum products, lubricants and electrical insulating materials were also discussed at the meeting.

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Electrified Zone, New York, New Haven & Hartford, near Darien, Conn., Looking West



# Smoke Abatement and Fuel Economy

Twenty-sixth annual convention of the Smoke Prevention Association  
is held at Toronto—Railroad program of seven papers and  
addresses occupied three sessions

THE Smoke Prevention Association held its twenty-sixth annual convention June 7 to 10, inclusive, at the Royal York Hotel, Toronto, Ont. The convention was featured by three railroad sessions, the first of which was held Wednesday afternoon, June 8, and the last two during the morning and afternoon of the following day. The Wednesday afternoon session was devoted to addresses and papers by H. T. Malcolmson, vice-president and general manager, Toronto, Hamilton & Buffalo, Hamilton, Ont.; W. G. Black, assistant vice-president, Chesapeake & Ohio, Cleveland, Ohio, and Ian M. MacLaren, president, Rochester & Pittsburgh Coal Company of Canada.

The Thursday morning session was devoted to the presentation of papers by J. W. Hughes, electrical engineer, Canadian Pacific, Montreal, Que.; R. J. Needham, mechanical and electrical engineer, Canadian National, Toronto, Ont.; F. P. Roesch, sales manager, Standard Stoker Company, Chicago, and L. R. Pyle, vice-president, Locomotive Firebox Company, Chicago. The afternoon session was devoted to a general discussion of smoke abatement and fuel economy practices.

## Effect of Smoke on Health and Property

Schuyler B. Patterson, director of Public relations, Anthracite Institute, New York, presented an interesting paper at the convention which was not included in the railroad session. His paper cited a number of pertinent facts with respect to the damage done to health and property by smoke. Directly across the Kill van Kull from Staten Island, New York, he said, are a large number of oil refineries and other manufacturing enterprises which are large smoke and gas producers. Medical statistics showed that there was a higher percentage of people afflicted with cancer and malignant growths on Staten Island than for the entire City of New York. The death rate from cancer, he said, was approximately 72 per thousand on Staten Island as against 41 per thousand for Greater New York. An investigation of conditions on the island showed that residents in the low-lying districts were more liable to cancer and similar malignant growths than those who resided on the hills. It was discovered that the smoke from the manufacturers located on the North Jersey meadows tended to settle in the low-lying parts of the island terrain, while the atmosphere on the higher or hill portions was relatively clean.

Mr. Patterson referred to medical authorities in stating that rickets and most of the bone diseases are solely attributable to the diffusion and defraction of the sun's rays by foreign particles in the air. Tracing the history of rickets back to the sixteenth century in England, the first evidence of serious bone diseases appeared among the children in the then manufacturing centers.

In addition to citing a number of human ailments and diseases caused by impurities in the air, Mr. Patterson also referred to the damage done by smoke to property. The United States Bureau of Standards, he said, is considerably alarmed over the action of sulphuric acid from the air which is attacking the limestone and marble

on the Washington Monument, Washington, D. C. The acid which is caused by  $\text{SO}_2$ , a product of combustion, uniting with an atom of oxygen from the air and forming  $\text{SO}_3$ , has eaten holes in the limestone and marble, into which water and frost have penetrated and succeeded in cracking the surface. He stated that the obelisk, Cleopatra's Needle, which stands in Central Park, New York, has deteriorated more in the fifty years it has been located there, than it did during its five thousand years in Egypt. The obelisk, as well as New York City Hall, which was built shortly after the American Revolution, is coated with paraffin every few years to prevent the deteriorating action of sulphuric acid. Figures compiled by Dr. Shirley Wynne, health commissioner of New York City, shows a loss of 96 million dollars a year due to air pollution and smoke. The Mellon Institute in Pittsburgh, Pa., has placed an estimate of 16 to 20 dollars per person, possibly two billion four hundred million dollars a year, as the loss by damage caused by smoke and air pollution.

## Preventing Smoke by Direct-Steaming in the Enginehouse

H. T. Malcolmson, in his opening address at the railroad session, referred to the installation of a Direct Steaming system in the Hamilton, Ont., shops of the T. H. & B. A description of this terminal was published in the June 7, 1930, issue of the *Railway Age*, page 1359. This terminal, he said, occupies a site covering 21 acres which is located on the outskirts of Hamilton. The location is an admirable one in all respects from a railway standpoint and is remote from Hamilton real-estate developments. The results secured by the installation of the Direct Steaming system, he said, have proved satisfactory and even of benefit not only to the railroad, but also to the residential district which has since grown up around the old plant. The elimination of smoke, he said, has created a spirit of good-will toward the railroad on the part of the residents in that district.

## Influence of the Modern Locomotive on Smoke Abatement

The paper by W. G. Black was entitled "The Modern Locomotive—Influence on Smoke Abatement and Fuel Economy." In his paper Mr. Black referred to the increasing demands from towns and municipalities that smoke and dirt be eliminated. He stressed the need of eliminating the outstanding discomforts in steam-railway travel which have been an unfavorable factor from the standpoint of competition on the part of the railroads with other forms of passenger transportation. In general, he said, it can be assumed that the maximum fuel economy will be realized when the emission of smoke is at a minimum. He pointed out that there are operating conditions and factors in design which may be such that the maximum of results under a given set of conditions may not be realized with the greatest freedom from smoke emission, but the conditions are those resulting from a careful study of the requirements and the adaptation of suitably designed units of power. Mr. Black classified the important elements entering into smoke



prevention and fuel economy as follows: "Methods of firing and skilled supervision both in firing and in operation; the locomotive itself and its proportions for the character of work which it would be required to do; locomotive auxiliaries, including the stoker, the superheater, feedwater heater, exhaust-steam injectors, etc., brick arch, Thermic syphon, improved type grates and gages or other means to secure the most economical operation under given conditions; economical utilization of fuel as influenced by operating conditions, and improved methods of handling locomotives at terminals by centralized control, such as Direct Steaming."

Intensive efforts towards the realization of fuel economy and the consequent abatement of smoke, Mr. Black pointed out, began long before the development of the principles of locomotive design which have in a great measure effected a revolutionary change in the cost of transportation. Improved methods of firing instruction have been a large factor in the results which have been obtained. However, he said, the best supervision and instruction could not have effected the present economies if the railroads were not operating modern power.

Mr. Black discussed the influence of efficient locomotive utilization, long runs, and the trend toward the elimination of long layovers at intermediate terminals. He mentioned the development of larger power units and larger tenders, the influence of the mechanical stoker and the development of the modern locomotive grate which is designed to give efficient combustion with stoker firing. It would be impossible, he stated, to carry the same depth of fire with a hand-fired locomotive as is done with a locomotive which is stoker fired.

He suggested the following means by which further improvement in locomotive operating efficiency and smoke abatement can be secured as subjects for further study and investigation: The improved distribution and utilization of the steam in the cylinders; reduction in cylinder back pressure while maintaining the required draft; reduction in the moisture content in steam delivered to the superheater; improved heat transfer from improved water circulation, improved efficiency in fuel combustion, and an increase in the relative steam space in the boiler.

Mr. Black referred to a series of standing tests which were made on the C. & O.\* which developed that the size of the exhaust nozzle and relative stack proportions which have been designed in accordance with established practices could be greatly increased with resultant economy. The exhaust nozzle was increased from 8 in. to 10 in. and new stacks 24 in. in diameter were installed to replace the original 21-in. stacks. In 1929, prior to the receipt of these locomotives, the fuel consumption per 1,000 gross ton-miles on the division over which these are now operating was 118 lb. In 1931, this fuel consumption was reduced to 79 lb., or 33 per cent.

#### Progressive Measures Adopted to Abate Smoke

Progressive measures adopted to abate smoke by the Canadian Pacific and by the Canadian National were discussed at the Thursday morning session by Mr. Hughes and Mr. Needham. Mr. Hughes stated that objectionable smoke may be the result of careless operation, lack of equipment to burn the class of fuel available, or faulty design which is the lack of proper engineering. In the larger railroad terminals, he said, steam is usually required from the stationary boilers throughout the year, and though the summer load may vary in relation to the winter load as much as 1 to 8, it is the practice when installing new plants or remodeling old ones to make use of the means of obtaining efficient combustion. In every instance, Mr. Hughes stated, the question of objectionable smoke is given consideration. He cited a number of examples whereby the Canadian Pacific made stationary boiler installations that are now operating with clear stacks. Mr. Hughes also referred to the benefits derived from the installation of the Direct Steaming system at the Toronto engine-house of the Canadian Pacific with respect to eliminating smoke and saving fuel.

Mr. Needham, speaking on the same subject, classified his remarks under three heads; namely, locomotives and modern motive-power equipment, engine terminals and power houses. During the past five years the Canadian National has reduced its locomotive fuel con-

\* These tests are described in the January 17, 1931, issue of the *Railway Age*, page 182.

\* \* \*



Delegates and Visitors Attending Annual Meeting of Purchases and Stores Division, A.R.A.

sumption from 134 to 126 lb. of fuel per 1,000 gross ton-miles. This saving was accomplished through the use of modern locomotives, increasing locomotive runs and by seeing that each locomotive is hauling correct tonnage. The Canadian National, he said, has 28 oil-electric rail cars, an oil-electric switcher, and one Diesel-electric road locomotive. The possibilities, he pointed out, of further utilization of this type of motive power are considerable with respect to smoke elimination.

In discussing enginehouses, Mr. Needham said that the best way to eliminate smoke from the stacks of stationary boilers is to shut down the boilers and perform the work by some other means. The majority of the enginehouses in the Central Region of the Canadian National have reduced their steam demands to the point where steam is required only for heating. About 80 per cent of all the boiler plants and enginehouses in the Central Region are closed down for periods ranging from seven to eight months during the year. This has been accomplished by gradually applying electric drives to air compressors, water pumps, shop machinery, etc. Hot water is collected from the locomotive boilers that are blown-down at washout periods and this water is used for washing-out the boiler. If the water in the hot well becomes too cool, however, it is warmed by steam from a locomotive that may be standing in the house under pressure. Compressed air is used in a number of enginehouses for drafting locomotives. This, he said, is cheaper than using steam. The air being dry does not absorb the sulphur gases as is the case with steam, so that the amount of acid corrosion of pipe and fittings around the enginehouse is materially reduced. Air pipes do not require insulation as steam pipes do to prevent condensation, so there is a considerable saving on that item. Induced draft equipment for steaming locomotives is installed in the engine-terminal of the Toronto Terminal Railway, which is jointly controlled by the Canadian Pacific and the Canadian National. Oil burners are used for steaming up locomotives in the Danforth enginehouse of the Canadian National at Toronto. These burners were introduced as the result of complaints of smoke which were made about a year

ago and are operating successfully. Mr. Needham also included a brief description of the power plant and smoke elimination facilities at the Point St. Charles shops of the Canadian National at Montreal.

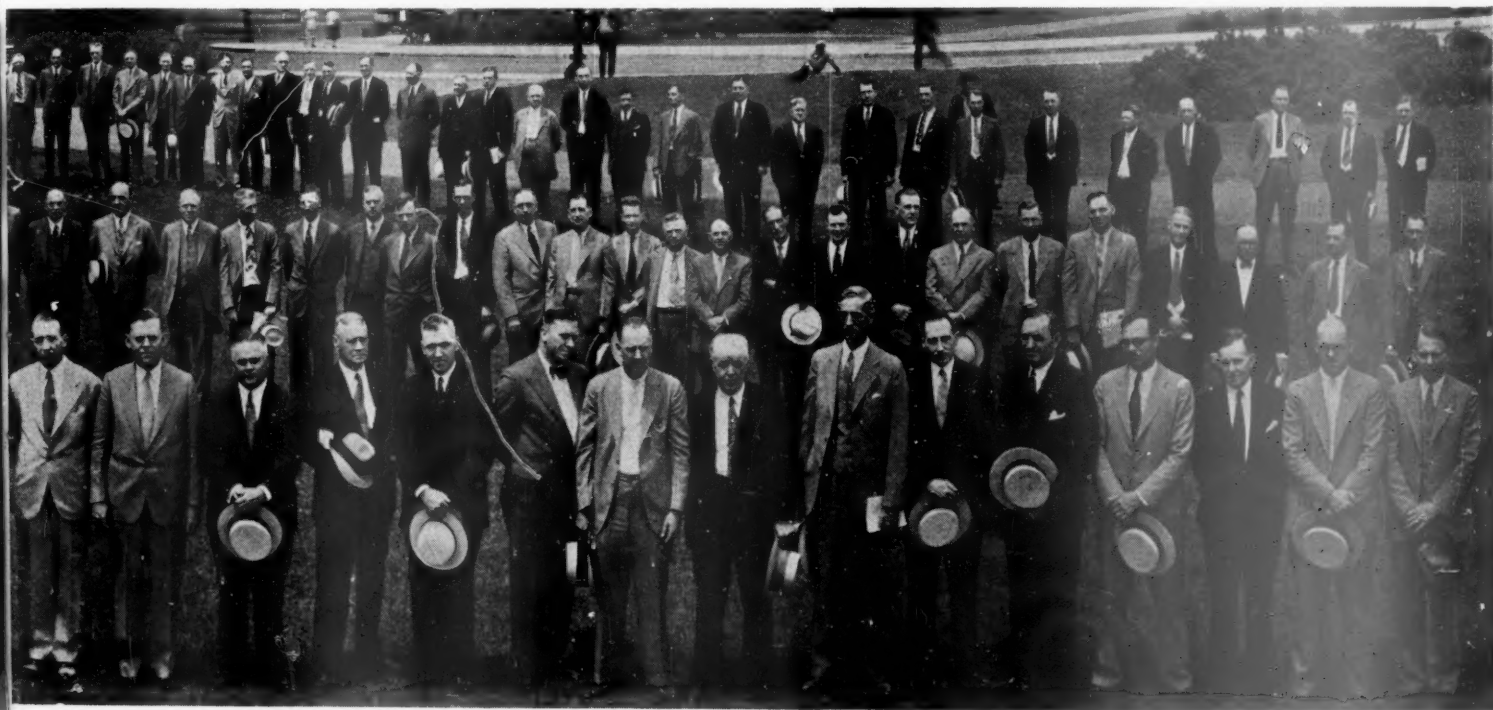
#### Locomotive Stokers

Mr. Roesch, in speaking on the subject "Influence of the Modern Stoker on Locomotive Smoke Abatement and Fuel Economy," reviewed the development of the modern stoker and its influence on grate, firebox and ash-pan design. By reducing the size of the openings through the grates to the minimum possible, he said, without danger of these openings becoming clogged or stopped up, a reduction in stack losses is accomplished. The height of a jet of air created by the draft and passing upward through the fire is proportionate to its area. Reducing the area of the air jet results in dissipating its velocity within a short distance above the fire bed, or at a point where the velocity of the gases passing through the firebox and through the tubes is at its minimum. Thus, the finer particles of coal are not picked up and raised to a point where they can be caught by the faster moving gas streams. This reduces the amount of sparks and cinders which are carried out the stack. The stoker, he said in conclusion, needs no defense. It stands today as one of the prime and necessary locomotive appliances. It is one adjunct which makes possible the modern locomotive and modern operation; also smoke abatement and fuel economy.

#### Developments in Front-End Construction

Speaking on the subject "Effect of Recent Developments in Locomotive Front-End Construction," Mr. Pyle reviewed the efforts made to eliminate sparks and cinders. He discussed the difficulties which the railroads have in maintaining nettings and other spark-arrestor arrangements which are now generally used. He also spoke of the difficulty encountered in securing efficient spark arrestors and at the same time not interfering with efficient draft. In his paper Mr. Pyle described the results that have been attained by the Cyclone spark arrestor.

\* \* \* \*



The Convention Was Held at the Stevens Hotel, Chicago, June 22 and 23



## Wood Preservation Slumps—Ties Stable

WHILE the quantity of timber given preservative treatment in the United States in 1931 decreased 29.8 per cent from the total in the previous year, the decrease in the quantity of crossties treated was only 23.1 per cent, thus raising this one classification to 62.5 per cent of the total of all timber treated, as compared with 57 per cent in 1930. Last year a total of 233,334,302 cu. ft. of wood was given preservative treatment, which represented a decrease of

Statement of Material Treated by Classes (Cu. Ft.)

Class	1931	1930	Decrease	Per Cent
Crossties	145,833,492	189,801,321	43,967,829	23.1
Switch Ties	10,897,532	14,622,713	3,725,181	25.5
Piles	12,119,880	17,027,153	4,907,273	28.8
Poles	39,966,062	75,258,146	35,292,084	46.9
Wood Blocks	1,256,567	5,012,445	3,755,878	74.9
Crossarms	319,625	1,299,246	979,621	75.4
Construction Timbers	16,624,072	19,013,369	2,389,297	12.6
Miscellaneous Material	6,317,072	10,284,184	3,967,112	38.6
Total	233,334,302	332,318,577	98,984,275	29.8

98,984,275 cu. ft. from 1930, while crossties treated totaled 145,833,492 cu. ft. a drop of 43,967,829 cu. ft. as compared with the previous year. All of the eight classes of material treated last year showed declines as compared with 1930, ranging from 12.6 per cent for construction timbers to approximately 75 per cent each

Treatment of Miscellaneous Materials (Ft. B. M.)

	1931	1930	1929	1928
Lumber	43,119,020	76,244,055	87,972,030	64,426,979
Fence Posts	13,468,058	17,843,001	10,904,180	7,272,422
Tie Plugs	1,149,058	1,779,215	2,018,147	1,747,026
Crossing Plank	2,248,946	2,552,370	273,588	1,460,463

for cross-arms and wood blocks. The quantity of switch ties treated dropped 3,725,181 cu. ft. to 10,897,532 cu. ft., or 25.5 per cent. Taken together, crossties and switch ties treated comprised 67.2 per cent of the total amount of timber treated last year, while in 1930 these classifications amounted to 62 per cent of the total.

Wood Preservation, 1909-1930, Together with Consumption of Creosote and Zinc Chloride

Year	Total Material Treated, Cu. Ft.	Number of Crossties Treated	Creosote Used, Gal.	Zinc Chloride Used, Lb.
1909	75,946,419	20,693,012	51,426,212	16,215,107
1910	100,074,144	26,155,677	63,266,271	16,802,532
1911	111,524,563	28,394,140	73,027,335	16,359,797
1912	125,931,056	32,394,336	83,666,490	20,751,711
1913	153,613,888	40,260,416	108,378,359	26,466,803
1914	159,582,639	43,846,987	79,334,606	27,212,259
1915	140,858,963	37,085,585	80,859,442	33,269,604
1916	150,522,982	37,469,368	90,404,749	26,746,577
1917	137,338,586	33,459,470	75,541,737	26,444,689
1918	122,612,890	30,609,209	52,776,386	31,101,111
1919	146,060,994	37,567,247	65,556,247	43,483,134
1920	173,309,505	44,987,532	68,757,508	49,717,929
1921	201,643,228	55,383,515	76,513,279	51,375,360
1922	166,620,347	41,316,474	86,321,389	29,868,639
1923	224,375,468	53,610,175	127,417,305	28,830,817
1924	268,583,235	62,632,710	157,305,358	33,208,675
1925	274,474,538	62,563,911	167,642,790	26,378,658
1926	289,322,079	62,654,538	185,733,180	24,777,020
1927	345,685,804	74,231,840	219,778,430	22,162,718
1928	335,920,379	70,114,405	220,478,409	23,524,340
1929	362,009,047	71,023,103	226,374,227	19,848,813
1930	332,318,577	63,267,107	213,904,421	13,921,894
1931	233,334,302	48,611,164	155,437,247	10,323,443

Including all timber, more than 80 per cent of the total amount treated was for the railways.

These data, together with the information given below, were abstracted from the annual statistical report on wood preservation in the United States for 1931, prepared by R. K. Helphenstine, Jr., forest service, United States Department of Agriculture, in co-operation with the American Wood-Preservers' Association.

The number of treating plants in the United States

at the close of 1931 was 216, of which 204 were in active operation and 12 were idle while 3 plants were abandoned. In spite of this, however, four new plants were constructed during the year and placed in operation. Of the active plants, 134 were of the pressure cylinder type, 53 were non-pressure (open-tank) plants, and 17 were equipped for both pressure and non-pressure treatment.

The consumption of creosote in 1931 amounted to 155,437,247 gal., or 27 per cent below the quantity reported for 1930, while the use of zinc chloride dropped 3,598,451 lb., or 26 per cent, to 10,323,443 lb. The use of miscellaneous salts and liquids underwent an even more drastic contraction, the consumption of the former, 958,285 lb., being a reduction of 812,640 lb., or 45.9 per cent below 1930, while that of the latter was 120,625 gal., a reduction of 82,265 gal., or 40.6 per cent under the preceding year.

Of the total number of crossties treated, which was 48,611,164, or 14,655,943 less than in 1930, nearly 63 per cent were treated with creosote, 25 per cent with creosote-petroleum mixtures, 8.5 per cent with zinc chloride and 3 per cent with creosote in mixture with zinc chloride. Of these percentage figures, only one represents more than a minor change from 1930; that for zinc chloride, which compares with 10 per cent of the total in 1930. Of the crossties reported, 20,951,062 were hewn and 27,660,102 were sawn.

From the standpoint of the number treated, oak ties again ranked first with 19,454,424, or 40 per cent of the total. Southern pine was second with 19.8 per cent and Douglas fir was third with 8.5 per cent, followed in succession by gum, ponderosa pine, beech, birch, maple, lodgepole pine, tamarack, elm and hemlock. In 1930 oak ties made up 33.3 per cent of the total and Southern pine 26.8 per cent.

The table of selected items of miscellaneous materials shows that the quantities of these materials that were treated last year were substantially under those of the previous year, the smallest reduction being in crossing plank, which showed relative stability.

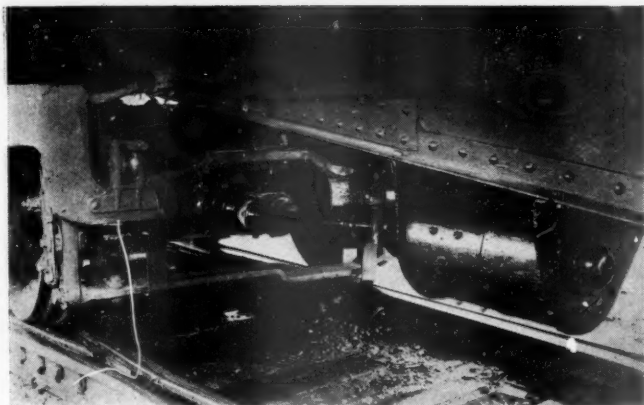
## Friction Drive for Axle Generators

A ROLLING friction drive for axle generators, known as the Gerlinger car axle drive, has been developed by the Dallas Machine & Locomotive Works, Inc., Dallas, Oregon. A beveled cast iron disc made in two halves is mounted on the axle. The beveled sides of the disc engage with two driven friction cones. A spring is used to pull the cones toward the axle and thus wedge the disc between them. The driven friction cones are mounted on two horizontal jack shafts at right-angles to the axle. The device can be used to drive one or two generators by connecting the generators to one or both of the jack shafts through universal joints and splined shafts.

The entire unit is enclosed in a cast steel housing to protect the drive from snow, ice, dirt and mechanical damage. The case which encloses the friction drive is mounted on ball bearings. The driven shafts are also mounted on ball bearings and all bearings run in oil.

The driven friction cones are made of a material designated as "Hi-Ball" manufactured by the Friction





Gerlinger Drive Applied to Single Generator

Products Company, Los Angeles, Cal. The manufacturer states that a maximum of 35 hp. can be obtained from each driven shaft when the speed of the shaft is 1000 r.p.m.

One of the drives was installed on a mail car on the Spokane, Portland & Seattle on December 15, 1931, and has been operating continuously since that time without maintenance. The generator used on this car is a 3 kw. machine. The frictions were examined after 40,000 miles and the small amount of wear observed indicated that a life from 400,000 to 500,000 miles should be attained, sufficient to avoid the need for changing frictions between shoppings of the car for general repairs.

## Trailer Cars for Reading Electrification

**A** NUMBER of trailer cars are being introduced by the Reading Company into its electric suburban service at Philadelphia, Pa. Twenty of these are now being delivered by the Bethlehem Steel Company. The car seats 84 passengers, weighs 114,000 lb. and will be used, in the ratio of one trailer car to three or more motor cars, on the extensions now being constructed to Chestnut Hill, Pa., and Norristown. The cars were converted from coaches for electric operation and are arranged with control and cab signals for operation in either direction from any position in the train. They do not have pantographs but are otherwise uniform in appearance with the electric motor cars. They are equipped with air-operated bus connectors and a copper tubing bus line which carries the 11,000-volt current over the roof of the car.

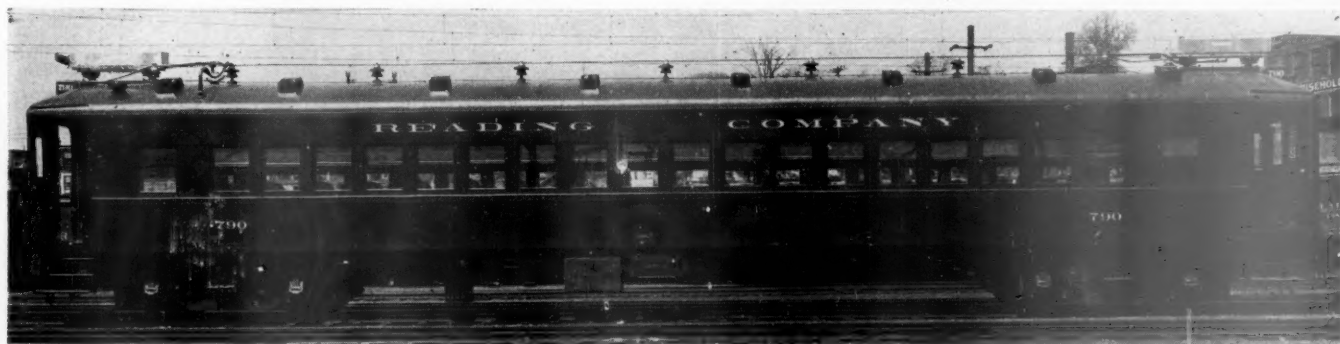
## Reduction in I. C. C. Appropriation

WASHINGTON, D. C.

**A**PPROPRIATIONS aggregating \$7,148,560 for the work of the Interstate Commerce Commission for the next fiscal year, a reduction of 24 per cent as compared with the \$9,412,473 appropriated for 1932, were agreed upon by the conferees on the independent offices appropriation bill on June 28, which was adopted by both houses of Congress on June 29, after the Senate had passed it with \$7,348,560 for the commission and the House with \$7,228,179. The total includes \$2,750,000 to "complete" the commission's valuation work, a reduction of 22.6 per cent under the amount allowed for the past year, but only \$683,560 for the Bureau of Accounts, which is a cut of over 54 per cent. In addition to the reductions which had been made by the Budget bureau these figures represent \$700,000 taken from the Bureau of Accounts and \$483,000 taken from the Bureau of Valuation on the theory that their work would be reduced by the proposed repeal of the recapture clause, which has been postponed until the next session of Congress.

With the aid of a list of railway salaries equal to or exceeding the \$10,000 heretofore paid to members of Congress, but ranging up to \$150,000 a year, reinforced by a charge that the railways were lobbying to wreck the valuation work in an effort to escape a recapture, some of the Progressive Senators, including Couzens, La Follette, Norris, and Johnson, had rescued most of the general appropriation for valuation on June 27, after the Senate appropriations committee had recommended that it be cut to \$750,000. The Senate in passing the bill on that day had also restored \$500,000 of the amount which the House had cut from the Bureau of Accounts because of the large proportion of its efforts which had been devoted to recapture work, but the conferees on the following day again lopped off \$200,000, although otherwise accepting the Senate figures. The conferees also adopted the language of the Senate bill as to the regular valuation appropriation, saying it was to "complete carrying out" the work, instead of "to carry out the work," as proposed by the House.

The list of salaries laid before Senators who had recently voted to cut their own pay 10 per cent was furnished at the psychological time by the Interstate Commerce Commission but used by Senator Couzens in such way as not to bring out clearly the extent to which many of them have been reduced. The charges of lobbying were made by the Progressive Senators in connection with the commission's explanations of the importance of its valuation work and their own ideas as to why the railroads might want to see it



Electric Multiple-Unit Trailer Car Converted from a Standard Coach

scrapped, but no evidence was offered that any railroad man had even suggested that the appropriation for the work be cut off without repealing the valuation or recapture statutes.

Either the Senate bill or the House bill would leave the commission with less than it was allowed in 1928 but more than it had in any year before that.

Although one of the principal arguments made in the Senate against the reduction in the valuation item was based on the use of valuation for recapture purposes, the bill as passed by the Senate still included a cut of \$983,000 and the House bill a cut of \$1,483,000, as compared with the Budget estimates, specifically earmarked by the House committee as the amount which could be saved if the recapture work were discontinued. The conference report made this reduction \$1,183,000, but the commission is expected to be able to continue recapture work to some extent from its regular valuation appropriation.

The Senate appropriations committee had recommended a reduction in the total appropriation for the commission to \$5,348,500, 43 per cent less than the amount available for this year. The Budget estimate was \$8,761,410. The House had cut the valuation item from \$3,554,368 available for 1932 and \$3,233,231 as recommended by the Budget, to \$2,750,000, and the Senate committee had proposed a further cut to \$750,000. The House had also cut the amount for the Bureau of Accounts, which received \$1,504,420 for 1932 and for which the Budget had recommended \$1,383,560, to \$383,560, and the Senate committee, after urgent appeals from the commissioners, had increased this amount to \$883,560, which was approved by the Senate. As passed by the Senate the bill would also provide \$2,600,000 for the general work of the commission, as compared with \$3,090,900 for 1932, \$500,000 for safety of employees, as compared with \$534,420, \$40,000 for signal safety systems, as compared with \$48,260, \$400,000 for locomotive inspection, as compared with \$504,865, and \$175,000 for printing and binding, the same as for 1932.

#### Railroad Executives' Salaries Listed

The list of salaries is one collected recently by Division 4 of the commission, which handles the railroad applications for loans from the Reconstruction Finance Corporation, and which had called for the data in an order addressed to the railway presidents on April 23 to which they were to reply by May 23. The commission had not yet made the information public but when the valuation item in the appropriation bill was reached on June 27 Senator Couzens produced a summary and analysis of the returns, which he had received from Commissioner Eastman with a letter dated June 21 in reply to his request of June 20. He also asked to have it printed as a Senate document.

Most of the Interstate Commerce Commission items in the bill were passed by the Senate without debate on June 25, including the item for the Bureau of Accounts, but when the valuation item was reached Senator La Follette asked that it be passed over until later, asserting that there would be protracted debate over it. The subject was brought up again on Monday and the attack on the committee proposal was begun by Senator Couzens in a speech in which he pointed out the importance of the valuation in rate-fixing, for recapture purposes since the recapture law has not been repealed, and particularly in connection with the commission's approval of loans from the Reconstruction Finance Corporation. He insisted that the amount

fixed by the House be retained, stating that the commission's activities "cannot be intelligently carried on if the auditing and accounting and valuation organizations should be disbanded as would be required under the provision of the amendment." He then brought up the question of railway salaries, quoting from Commissioner Eastman's letter.

Commissioner Eastman said that the questionnaire had called for a list of positions paying \$10,000 or more annually as of December, 1929, and the rate of pay of the same positions as of March, 1932. It should be noted, he said, that the process of reductions has been going on since March, 1932. Such reductions are shown in the returns in the case of the Pennsylvania and Missouri Pacific systems, and similar reductions have recently been announced in the newspapers in the case of the Atlantic Coast Line, the Louisville & Nashville, and the New York Central. "Doubtless," he added, "there are other similar instances."

"As of March, 1932," Senator Couzens said, "the president of the Pennsylvania was getting a salary of \$135,000 a year, the vice-president, \$58,500 a year, five vice-presidents of the western, central, eastern, New York, Chicago, and New England divisions received \$31,500 per year each; the vice-president in charge of real estate, valuation and taxation \$36,000 a year. In other words, the official of the Pennsylvania Railroad alone who has charge of valuation and taxation received four or five times as much as is paid to the officials of the Interstate Commerce Commission charged with the responsibility of valuation. Then we have the vice-president in charge of finance, \$45,000, vice-president in charge of traffic, \$45,000, vice-president in charge of operations, \$54,000, and so on down the list until there are enumerated 100 officials of the Pennsylvania Railroad receiving \$10,000 per year or in excess thereof. The report goes on to enumerate the large number of officers engaged by each of the large railroad systems.

"And yet, Mr. President, the railroads are lobbying to have this appropriation cut from \$2,750,000 a year to \$750,000 a year. In other words, the whole appropriation might as well be eliminated and the whole activity might as well be eliminated as to take this means of wrecking the whole system maintained by the Interstate Commerce Commission.

"Let me refer to the Southern Pacific Railway, for example. The chairman of the executive committee receives \$135,000, the president \$90,000, the executive vice-president \$36,000, vice-president \$36,000, another vice-president \$27,000, another vice-president \$27,000, vice-chairman of the executive committee \$76,500 per year, vice-president in charge of operations \$31,500, vice-president in charge of freight traffic \$27,000, and so on down the list, until it lists 35 officials receiving \$10,000 per year or more, the aggregate being \$1,191,930 per year.

"Let me refer to the Baltimore & Ohio Co., which has 42 officers receiving \$10,000 per year or more. The president gets \$120,000 as of March, 1932; the senior vice-president, \$76,500; one vice-president \$54,000; another vice-president, \$45,000. Then they have a general manager in the East, who receives \$27,000 and a general manager in the West at \$18,000, a chief of motive power, \$29,700, and then there are general attorneys and attorneys receiving \$13,000 and \$14,000, up to \$25,000 per year. And yet these railroads are trying, so I am informed, through lobbying methods, to wreck the accounting and auditing and valuation organizations of the Interstate Commerce Commission.



"For instance, take the case to which I just referred of the St. Louis & San Francisco system, which will go into the hands of receivers on July 1, 1932, unless they receive a substantial loan of \$5,000,000 from the Reconstruction Finance Corporation. In spite of their financial condition, their president receives \$63,000 a year and the chairman of the board and executive committee, \$36,000 a year. They list 12 officials receiving in excess of \$10,000 per year.

"There have been some reductions. I understand the president of the Pennsylvania has been reduced from \$150,000 to \$135,000 as of March last. While I have no official record, I am informed there has been another reduction from \$135,000 to \$122,500, but as to that I have not the absolute figures.

"Now let us take the Wabash Railway, which is in the hands of receivers and has a very large and substantial loan from the Reconstruction Finance Corporation. The president of that system gets \$45,000 per year, the chief operating officer gets \$22,500, and the general counsel \$27,000 per year. In other words, one general counsel for one railroad company gets the same salary that is now proposed for three Interstate Commerce Commissioners having the responsibility of the accounting and looking after the regulation of all the railroads.

"Mr. President, I do not want to take the time of the Senate to go all through these files, but at a later time I am going to ask that these may be made a Senate document so that Senators may have all of the information that I have concerning the amounts of salaries and the amounts of overhead carried by these railroads. We hear from business, from railroads, from every sort of agency, condemnation of bureaucracy in the federal government, and yet I submit when the Pennsylvania company has to carry 100 employees whose salaries aggregate over \$2,000,000 a year, it is evidence that there is undoubtedly a great deal of bureaucracy and unnecessary overhead expenditure there."

Senator Couzens was followed by Senator Johnson, of California, who said that the committee amendment of the House bill "seeks to give to the railroads of the country substantially \$360,000,000 by destroying the activity of the Interstate Commerce Commission" and that the Supreme Court had held in the Dayton-Goose Creek case that "these sums under the recapture clause are due to the United States government."

Senator La Follette then took up the fight, saying the adoption of the committee amendment could have no other effect than "wrecking" the valuation and discharging 700 highly trained employees. He quoted from another letter from Commissioner Eastman, which gave the number of men to be discharged. Commissioner Eastman said that at the hearing before the Senate committee the commissioners had concentrated on the proposed cut of \$1,000,000 in the appropriation for the Bureau of Accounts, "showing that it was based upon a complete misapprehension of the effect of recapture repeal upon the need for that bureau and its work." Apparently that argument has some effect, he said, as is shown by the restoration of \$500,000, but "the Senate committee now proposes to slaughter the Bureau of Valuation instead. In the meantime it has become apparent that recapture will not be repealed at this session. As for the other cuts, they will hamper us in our work, but under present emergency conditions we are not disposed to press an objection. The cut is very severe in the Bureau of Accounts, and we are of the opinion that even in the present emergency the reduction should stop at \$1,000,000 instead of going to \$883,560. However, we shall hope to recover some of

this lost ground in future years, and in the meantime we may be able to avoid wholesale discharge in this bureau by some scheme of voluntary furloughs without pay or possibly by reducing materially per diem for traveling expenses. In the case of the Bureau of Valuation, however, the cut goes so far that there would be no possibility of saving the bureau from ruin."

He also pointed out that the practical repeal of the valuation act was urged by the Association of Railway Executives at the hearings before the House committee in interstate and foreign commerce earlier in the year but that the committee was unanimous against such repeal, and submitted that it would be contrary to sound public policy to put an end to important provisions of the law without repeal by withholding appropriations in the last hours of the session.

Commissioner Eastman's memorandum also included an objection to the words "complete carrying out," saying that the idea, apparently, is that this appropriation is to wind up and close the valuation work by indirection, and that to complete carrying out the objects of the valuation act within a single year is impossible because the act contemplates by its very terms a continuing process and a readjustment of values each year.

#### No Railroad Influence Exerted

Amid all the charges of railway lobbying for the reduction there was not a word in the debate to indicate that any Senator had ever heard, or at least remembered, a word of any argument such as might have been made by any railway officer or lobbyist who might have wanted to bring about a cut in the appropriation. There was no one to point out that after spending some \$42,000,000 of public funds on the valuation work the commission had found the result too high for use in compliance with the rate-making rule of Section 15a. No one remarked that the nearest approach to an aggregate valuation of the railroads which the commission has ever produced since 1920, the exhibit of valuation studies introduced into the rate advance case last summer based on valuation studies estimated up to date, had no reflection in the commission's decision in that case. No one called attention to the fact that such use as the commission has been making of its valuation data has been in an informal ex parte way so that a railroad could not possibly challenge the effect of the commission's consideration of its own estimates of incomplete valuation records not yet passed on by the courts and in many cases not yet subjected to hearings on the railroad protests. No one noticed that the \$360,000,000 estimate of railroad recapture liability had been described by Commissioner Eastman as a "rough estimate" based largely on the old O'Fallon method which it would have to revise before translating the estimate into recapture "claims."

Senators Bingham, Copeland and Smoot, of the committee on appropriations, spoke in a general way in defense of its proposals, but none of them indicated that they had been primed by any railroad man. Senator Bingham attempted to show that the proposed expenditures for recapture had already been cut off by the House and that the reduction recommended by the committee was in the general appropriation for the valuation work. Senator Copeland pointed out that it was necessary to economize somewhere but that he was inclined to believe it was bad economy; and Senator Smoot said the committee had decided that it would be almost useless to continue the valuation of property at a time when no one could really arrive at what the real valuation may be under present conditions. He said he

did not know of a single railroad man who had written to the committee on the subject and that no railroad man had ever called upon him "in any way, shape, manner or form with reference to this item." Senator Copeland added that he did not think "there was a bit of railroad influence either pro or con involved in this cut."

## Equip Tractor with Diesel Engine

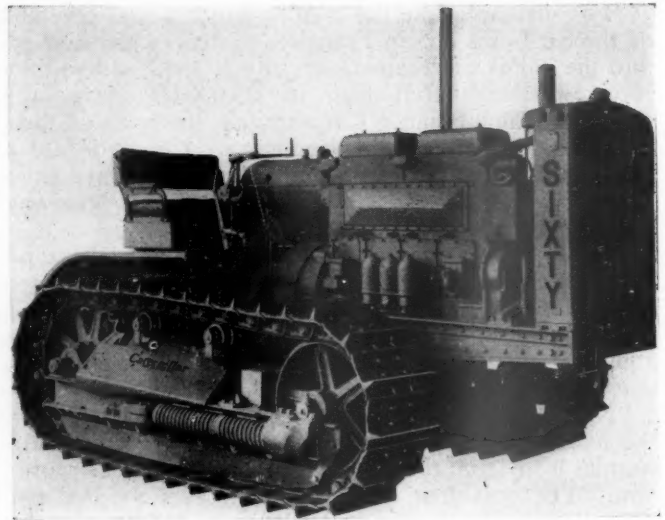
**A**FTER several years of development the Caterpillar Tractor Company, Peoria, Ill., has applied a specially-designed Diesel engine to its Model Sixty tractor, the design of which has been modified to adapt it to the use of this type of power. It is thought that this tractor should prove even more adaptable to railway work than gasoline-engine powered tractors because of its economy and simplicity of operation, since it utilizes fuel that can be purchased at from one-third to one-half the price of standard automotive gasoline. Moreover, it is said that the fuel consumption of the Diesel engine is from 60 to 70 per cent of that of a gasoline-powered engine of equivalent capacity, and that the use of non-volatile fuels affords a safety precaution that is highly desirable in railway work. It is claimed also that heavy loads may be started by the Diesel-powered tractor where a gasoline unit normally might stall, by virtue of the momentarily higher over-load capacity of the Diesel engine.

The outstanding feature of the Diesel engine is the method of handling the fuel-injection apparatus in the event of difficulty or failure. A complete extra set of spare fuel-injection apparatus, which has been adjusted, regulated, timed and sealed at the factory, accompanies each Diesel engine. In the event of difficulty with the apparatus originally installed, it can be replaced with the extra set and returned to the factory for servicing. Other important features attributed to the fuel injection apparatus are its ability to maintain full load over extended periods of operation; to preserve combustion efficiency and maintain balanced firing at light loads; to provide variable load with satisfactory combustion quality; to produce smooth operation over the entire operating range, by eliminating combustion roughness and detonation; and to reduce maintenance costs to a minimum.

The engine is completely enclosed and vital operating parts are dust-proofed, without, it is said, minimizing accessibility. The engine control is centralized in one lever located on the driver's seat, thereby giving this tractor the same operating control as the gasoline-powered tractor. The elimination of all field adjustments of the fuel injection apparatus permits the operation of the engine with the use of only one control lever.

The engine is started by a small two-cylinder Caterpillar gasoline engine, which is mounted on the left side of the main power unit. This starter is engaged to the main engine flywheel through a clutch and Bendix drive, which connection is automatically disengaged when the Diesel engine reaches operating speed. Gasoline power for starting was chosen because it is better adapted to tractor use than compressed air or an electric motor.

The Diesel-powered Sixty develops a maximum



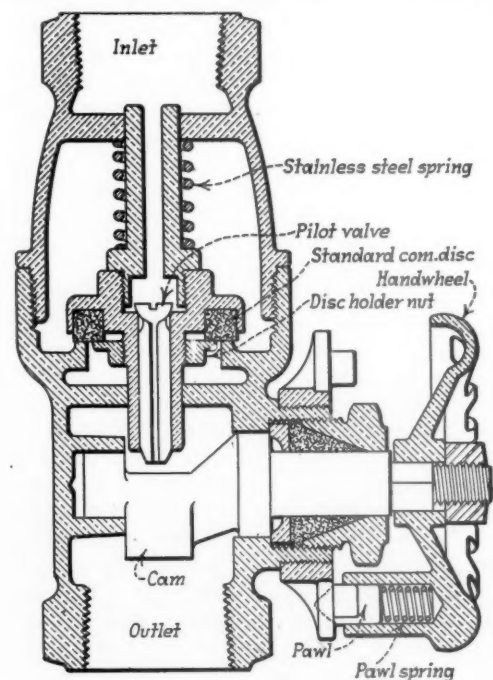
The Caterpillar Sixty Tractor Equipped with a Diesel Engine

drawbar horsepower of 63 and a maximum belt horsepower of 75. The various speeds in miles per hour are as follows: First, 1.9; second, 2.6; third (standard), 3.7; third (special), 4.4; and reverse, 1.4.

## New Steam Valve Involves Use of Cam

**A**NEW type of steam valve, known as the C. C. A. valve, in which the common causes of valve trouble are said to have been eliminated by utilizing the principles of the cam in its design, has been brought out by the Murdock Manufacturing & Supply Co., Cincinnati, Ohio. This valve is adapted for use around passenger stations, coach yards, enginehouses and other places where the steam pressure does not exceed 125 lb. per sq. in.

The design is such that the valve is held against its



Cross Section of the C. C. A. Valve



seat by a spring and by the steam pressure when in the closed position. It is opened by a cam on the handle shaft that engages a stem on the bottom of the valve, this cam being entirely clear of the valve stem when the handle is in the closed position. As a consequence, it is impossible to damage the valve seat by the application of excessive force to the valve handle. The main valve of the device cannot be "cracked" and when a small supply of steam is desired it is provided by an auxiliary pilot valve.

In order that the operator may know which position the valve is in at any time, the cam action is controlled by means of a bronze flange directly behind the hand wheel, in which are provided four countersunk notches indicating the various positions of the valve. When a small supply of steam is desired, the hand wheel is turned to the first notch, which opens the pilot valve completely. At the second notch the main valve is in the half-open position, and at the third notch the main valve is entirely open. There are no intermediate points at which the valve may be set and the movement from the closed to the open position requires only a half turn of the wheel. The flange is also equipped with raised stops at the closed and fully open positions.

## Introduce New Type of Roof Construction

**E**XCLUSIVE rights in America for the design and construction of reinforced concrete "shell domes" and "barrel shell roofs" according to the designs and under the patents of Dyckerhoff & Widmann, A.G., of Wiesbaden-Biebrich, Germany, have been secured by the Roberts & Schaefer Company, Chicago. This system of design, which is known abroad as the Zeiss-Dywidag system, in brief, permits the roofing of large areas without intermediate supports by a method that is both economical, due to the relatively thin "shell" of reinforced concrete required, and architecturally pleasing. It is particularly adaptable to structures where a large unobstructed floor space is essential, such as train sheds, dock pier structures, etc.

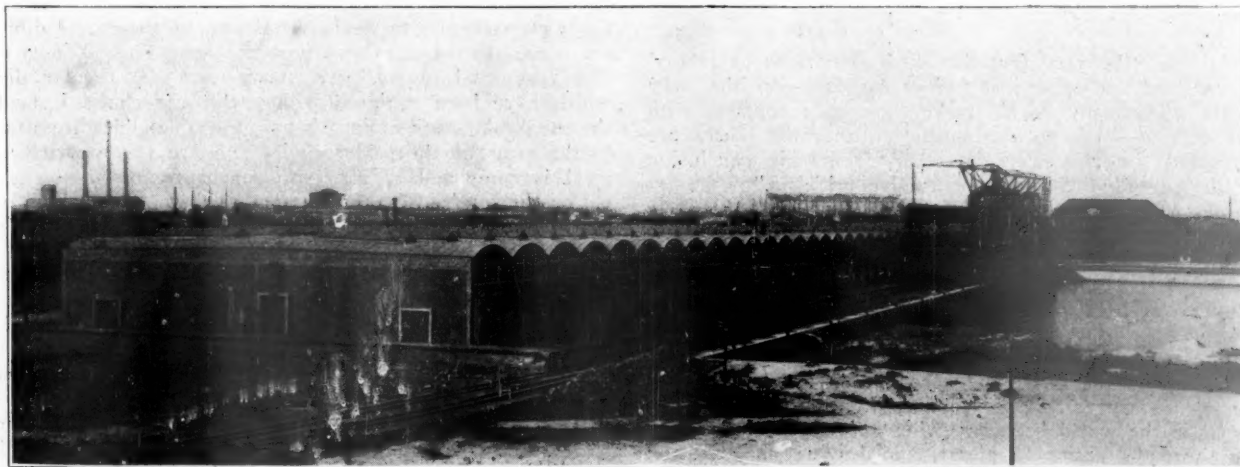
These "shell" structures are of two general types—those curved in two directions, known as domes, the simplest type of which is the hemisphere, and those curved in one direction only, called vaults, of which the

simplest form is the semi-cylinder having a rectangular plan. By combining intersecting domes and employing a series of vaults, irregular areas are covered. Through the application of intricate mathematical analyses it is said that the calculation of stress in this system of construction has been developed to a high degree of exactitude. By the use of a form of reinforcing known as Zeiss network, the construction of shell structures has been simplified, while costs have been reduced to a minimum by the standardization of parts, the economic use of materials and the simplification of centerings and forms.

The underlying principle of the shell design is that, when suitably arched, shell domes will support loads with minimum or even zero bending moments and therefore, with a uniform distribution of compression across the depth of any section. It is claimed that only direct stresses occur, so that the shell thickness is dependent upon the buckling effects of the direct stresses only, thereby making extremely thin shells possible. For this reason the influence of span length is minimized so that extensive areas can be covered without intermediate supports and without excessive dead load in the shell. It is said that shell vaults with a ratio of shell thickness to length of span of as little as 1 to 600 may be attained.

"Shell domes" and "barrel shell roofs" have been used in Germany in the construction of various types of structures requiring large roof areas without intermediate supports.

OUT OF SIXTEEN EMPLOYEES of the government-operated railroads of the Union of Socialistic Soviet Republics who were recently placed on trial, charged with responsibility for a disastrous collision between two crowded passenger trains at Zelonaya, between Kharkov and Dnieperpetrovsk, two have been sentenced to death, 13 imprisoned for terms of from one to 10 years, and one exonerated. The wreck, in which an undetermined number of persons were reported killed, occurred on May 15, but was publicly revealed for the first time at the opening of the trial on June 9, according to Associated Press dispatches. The current trial is the third in which Russian railway men responsible for accidents have figured in the past six months; four employees were sentenced to death and others to prison on January 2 when they were found guilty of a wreck involving loss of life on the Siberian Railroad, while heavy prison sentences were imposed on seven workers involved in a more serious accident near Moscow in January, when 50 persons were killed and many others injured, as reported in the *Railway Age* of January 30.



A Dock Shed in Which the "Barrel Shell" Type of Roof Construction Was Used. The Roof Consists of 36 "Barrel Shells" Each of Which Has a Span of 30 ft.

# Communications . . .

## It Will Help!

TO THE EDITOR:

As a reader of the *Railway Age* for a number of years I find the editorials and articles of great interest. Recently in talking to another subscriber he spoke of the interesting articles in the *Railway Age*, but he also talked of discontinuing his subscription for economic reasons. I had a little chat with him and told him that I could not see where any economy would develop from dropping a subscription to a publication which was doing so much for the railroad worker in general. Before I left him he was convinced that if all the subscribers would act as he had intended to, the *Railway Age* would soon be in the discard and the railroad workers would lose one of their best friends. I am sure he will renew his subscription when it comes due.

BERT CHARLES.

## "The Box-Office Attitude" in Consolidated Ticket Offices

NEW YORK.

TO THE EDITOR:

I should like to add one more bit of constructive criticism to what is rapidly assuming the aspect of a general symposium—in the letter columns of the *Railway Age*—on passenger traffic maladies and possible remedies therefor.

Why, in the name of Jim Hill, must a prospective railroad patron, on entering a consolidated ticket office in some of our larger cities, be made to feel that the place has taken for a motto the famous statement commonly—although erroneously—attributed to the late Commodore Vanderbilt? Why must a customer be given the impression so often obtained at a theater box-office—that the selling of a ticket is a favor grudgingly bestowed by a benevolent corporation upon a suppliant purchaser, rather than a simple commercial transaction of mutual benefit to buyer and seller?

The clerks are far from blameless. They take customers out of turn. They dawdle aimlessly around, killing time for themselves and for everyone else, while waiting for change from a general cashier. They insist on "balancing their money," even though patrons are fuming and fretting on the other side of the counter. To be fair, however, the fault is not always entirely theirs; for they cannot be blamed if they have to spend half an hour looking up round-trip rates to obscure points for fussy old gentlemen who "bought the same ticket last year." It is possible, too, that the conditions related, observed during a pre-holiday rush, are not typical; at other times, when less hurried and under less strain, consolidated ticket office clerks may be the very essence of efficiency and courtesy.

Nevertheless, the very fact that such conditions as related above can and do exist just before holidays—on the very occasions when many people make their only contacts with railway service—leads to the conclusion that the offices are under-staffed for peak periods. And from this conclusion comes the promised "bit of constructive criticism."

One more clerk, for each railroad represented in such a consolidated office, for the three or four days immediately preceding a holiday or a summer week-end, could virtually eliminate any cause for irritation on the part of patrons. One more clerk—even if he never spoke to a customer and did only that clerical work which now absorbs part of the time of regular agents—could work wonders toward improving the efficiency of the office and speeding up the handling of prospective passengers. One more clerk could make all the difference in the world between giving a favorable impression of the railroad's desire to please, and leaving business and holiday travelers alike with a strongly unfavorable idea of its efficiency and service.

Under present conditions, there must be such men available—

furloughed employees, who would require no training, and who would be glad of even a few days' work each month. And if their employment reacts favorably on only one passenger a day; if it prevents only one surly "Rotten service here! I'll take the bus next time!", then such employment will yield a handsome return on the small wages paid.

N. E.

## North Shore Line's Answer to the Passenger Traffic Problem

CHICAGO.

TO THE EDITOR:

I was tremendously interested in reading R. E. Collons' letter concerning passenger traffic policies and their relation to increased travel on the railroads, published in the April 16 issue of *Railway Age*. That the gentleman has given the matter serious thought is obvious, and regardless of whether we in the railroad business agree with all his statements, we must admit that there is an urgent necessity for changes in our selling efforts if we expect ever to regain traffic lost to motor buses and private automobiles.

Improved schedules and a general speeding up of service of local as well as through trains is a paramount necessity. The public has been made "speed conscious"—they have been educated to it. Every automobile advertisement placed in every newspaper and publication in the country features speed.

The ever-increasing demand of the public for faster service, particularly in densely populated territory such as is served by the North Shore Line, where improved boulevards practically parallel the railroad for its entire length, has made necessary constant and careful study of train speeds. Through complete rearrangement of operation, elimination of stops on some trains and additional work for others, we have been able to speed up our Chicago-Milwaukee service, so that the maximum running time of any train for the 90 miles between these two cities is now 1 hr. 55 min. with a minimum running time of 1 hr. 40 min. We also have been able to speed up all commuter service between Chicago and Waukegan an average of about 6 min. for each run. This, we believe, is a step in the right direction, and with constant improvements in safety devices and crossing protection, we are hopeful of being able to go still further to meet the demands of the public.

We are very much in accord with Mr. Collons when he states that the "entire dining car scheme" must be reversed. We have, however, exceeded even his "requirements" for an ideal dining service. Proverbial high prices have been dealt a knock-out blow through the inauguration of a new parlor-buffet service, introduced on North Shore Line limited trains operating between Chicago, Kenosha, Racine and Milwaukee. Complete table d'hôte meals—breakfast, luncheon and dinner—are served to travelers at a cost not exceeding 50 cents each. The cars used in this new service are the regular diners, which have been equipped with parlor car chairs instead of the usual tables and dining chairs. Portable tables are attached to the arms of the parlor chairs and are removed when the meal is completed. This arrangement combines dining and parlor car service. The equipment used was "invented" in the North Shore Line shops and is the first of its kind to be used on American railway lines. The chairs may be faced in any direction, making it possible for a diner to view the scenery if he desires, or face a companion in comfortable *tête-à-tête* fashion. These parlor-buffet cars are the answer of the North Shore Line to present-day demands for the best in travel comfort and convenience at the lowest possible cost. In establishing this new service, we have endeavored to hit on an idea that would combine luxury and economy, and to have prices so low that it is "as cheap as eating at home." We have been watching this new service very closely since its inauguration and find that the public reception has been extremely enthusiastic.



The completeness of the meals served is seen in typical menus. Breakfast (50 cents), for instance, includes tomato, orange or grapefruit juice; eggs, any style, or ham or bacon and eggs; toast and coffee. A typical menu for luncheon or dinner (also 50 cents), includes the choice of broiled lamb chop or grilled small steak; French fried potatoes; bread and butter; home-made pie; and coffee, tea or milk.

While the passenger is enjoying this low cost meal, he is afforded the comforts of a parlor car chair free, paying only for such accommodations when occupied after completion of his meal. For instance, a person boarding a train in the Chicago loop and ordering a meal which is finished on arrival in Waukegan, and still desiring to occupy parlor car space, pays only the parlor car charge from Waukegan to his destination at Milwaukee, Racine, Kenosha or Zion. If the passenger does not want parlor car accommodations, he merely steps into one of the coaches carried on these trains.

The parlor-buffet cars are operated on limited trains leaving downtown Milwaukee at 7 a.m., 12 noon and 6 p.m., and leaving the Chicago loop at 5 min. after the same hours.

This innovation and other improvements on the North Shore Line, we are confident, will meet with public approval, and are some of the ways through which we are hopeful of bringing back to our railroad business it justly deserves.

ROY THOMPSON,

Traffic Manager, Chicago, North Shore & Milwaukee.

## Says Present Conditions Were Paralleled in 'Seventies

GREENVILLE, S. C.

TO THE EDITOR:

In the early 'Seventies, the Mississippi valley found itself in possession of railroads far in excess of the public need—in the long run a state of affairs probably not a great economic evil, stimulating, as it did later, huge developments in both agriculture and industry. Temporarily, however, the results were disastrous to both the railroads and the people. Farms were mortgaged to the hilt to buy stock in the roads. Town, county and state borrowed money which, in many instances, could not be repaid. Then followed bankruptcy of the roads, wiping out all of these investments, and leaving at the same time the people with exorbitant rates and many unfair discriminations upon them and, along with these, high interest charges on their mortgages and high local taxes.

1932: A great number of the railroads on the verge of receivership, others actually in this state. Population taxed to the breaking point. In the '70's, no highways to speak of. In 1932 the country a complete network and still building, all at a cost of many billions of taxpayers' money, and now what? When the taxpayer attempts to use the highway which his money has built, he finds it monopolized by huge vehicles operated for private gain, and is lucky, if nothing worse than being crowded off his highway happens to him. No two highway carriers for hire have the same rate for similar haul. The only uniformity is in their disregard of both the personal and the property right of those to whom the highway rightfully belong. And, granting a cheaper rate than by rail at present, will it prove the cheaper in the long run when repairs to the highway are paid for? So 1932 has problems similar to those of the '70's. Freight and passenger charges out of line, discriminations of various kinds, transportation facilities far in excess of the capacities to absorb them, and stragglatory taxes.

As to saving the railroads: Perhaps it is of high importance that some action be taken. I am convinced, however, that this action should come from the railroads. At least the railroads should show some disposition to help themselves. Anyone who has followed even most casually the attitude of rail management generally through the period since federal control must know that the condition of the roads today is largely due to their lack of visualizing their proper function in today's world. With a supine sort of indifference toward the growing life, and consequent changes in method; coupled also, it seems to me, with a contempt for the intelligence of all others who have endeavored to reason with them, they have gone on and

on in their blindness, putting out in capital expenditure a sum approximating nine billion dollars since 1919, and now find themselves with just about six billion invested in various physical properties that are of no earthly use to them. Caught in their own net, they challenge the right of just about every other being to exist, using the good old terms of subsidy, discrimination, favoritism et al., and abusing, at the same time, some who could and would have helped them to avoid the conditions now confronting them.

With reference to their competition I would like to leave this thought: It occurs to me that the natural way to meet competition is with a superior service. This means growth in ability to serve. There are, in my opinion, limiting factors in all forms and classes of service. To find and recognize such factors is an essential part of growth. In the case of the railroads it would appear that, because such findings might tend to throw out of gear, rather than continue, old policies and conditions, all such action is dismissed as being poison and dangerous.

CARTER MILLER.

## A Housing Program To Bring Back Prosperity

CLEVELAND, OHIO.

TO THE EDITOR:

While reading the June 4 issue of the *Railway Age* I noticed your editorial entitled, "Public Works and the Depression." As I disagree with some of your conclusions I am writing this letter. My viewpoint may not seem "sane and intelligent" to you but I'll run that risk.

You, of course, blame the "insurgent majority of Congress" for holding back business recovery. Our great business geniuses, our creators of the "New Era," are (according to your theory) standing back, quivering with fear, forcing the closing of factories, the passing of dividends, the defaulting of bond interest, and the impoverishing of millions all because a few members of Congress have enough "guts" to put forth a program which will endeavor to open factories and assist business in paying interest and dividends with the attending release of millions of people from the grip of poverty.

Why isn't business using the enlarged credit that is now available? Of course many business men have unwarranted pessimism. It is always difficult to see a promising future when conditions are at the bottom of the down swing. Bankers must not only have money available for lending before they can extend additional credit, but they must also be convinced that the credit can be used in profitable business enterprise. With steadily declining commodity prices as well as reduced volume of business the prospects for profits have not been promising enough to stimulate widespread lending or the extensive utilization of credit even where it has been available. That is the real reason, fear of not making a profit and not fear of Congress.

I am just as much opposed to "pork barrel" appropriations for public works as you are. Vast programs of public works cannot be extemporized. I do believe that Congress should organize a Housing Syndicate which would proceed at once to a survey of the slum, submerged, and interstitial areas of cities, make regional plans, and prepare a gigantic housing program. It would intrust construction to limited dividend corporations in each locality, or, where this is not feasible, form special corporations for the purpose. This program would enroll an army of two or three million men to tear down and build cities decent to live in.

On the need no question can be raised. It's a social as well as an economic need. Bad housing breeds crime and epidemics, cuts at the root of good citizenship and stands everywhere as a denial of every wholesome pretension society makes.

This would greatly assist the carriers for without a doubt they would profit from the freight which would have to be carried to put such a program through. It would produce units self-supporting which would in no way compete with railroads—two big features from everyone's point of view.

I do hope that you see fit to endorse this as I feel that if your paper puts its influence behind a movement for better housing it will certainly be a big step forward.

ROBERT F. BETZ.

# Odds and Ends . . .

## Purely Historical

The Central of Georgia magazine has uncovered a predecessor to Rule G. The magazine quotes from the book of rules issued by the Virginia & Tennessee Railroad in July, 1854, which contains the following:

"Rule 12. Conductors and other trainmen must not attempt to influence passengers in favor of or against certain saloons, but must act impartially in this respect."

## Still on the Job

Every day a man may be seen walking along the tracks of the Delaware & Hudson at Ft. Ann, N. Y. As he walks, he carefully examines each rail, tie, joint and spike. While he carries none of the tools which would identify him as a regular maintenance of way employee, his intelligent inspection of the track marks him as a person who knows the business. The man is Joseph Greco, who was foreman on this section until his retirement on pension on July 1, 1931. He has other interests to occupy most of his time, but they are all secondary in importance to his daily walk along the section which he still likes to call his own.

## Matrimonial Dilemma

There was much excitement in Ft. Worth, Tex., recently when the Texas & Pacific informed its married women employees that they would be replaced on June 1 if their husbands were earning as much as \$50 a month. Eight of the women thought they saw a way to circumvent this order, and they hurried away to court to file suit for divorce. Presumably their idea was that in times like these a husband is not worth nearly so much as a job. Unfortunately, when the news of their action got around, they received a severe shock. The officers of the railway announced that the divorces, even if granted, would have no effect, since the order took into consideration the domestic status of the women on May 16, when the order was issued.

## Maybe This Is the Answer

According to the Wall Street Journal, railroad grade crossings in Ireland are not the menace to motorists that they are over here. Every such crossing is guarded by a watchman throughout the daylight hours. At dark a large iron gate on each side of the railway is swung across the highway and padlocked. Pedestrians can get through without trouble, but vehicles cannot. Motorists traveling after dark must go to the watchman's house nearby, and get him to come out and unlock the gate before they can pass through. This system looks like the solution of several difficulties in this country. It ought to reduce or eliminate grade crossing accidents, and if the crossing watchmen were of the right type, it ought to tie up highway competition pretty effectively. By the right type of watchman, we mean one who never stays home at night.

## This Must Be the Height of Something

The recent retirement of Conductor Elisha Whitlock Elliott, of the Jersey City Southern district of the Pullman Company, brought to light his unique record. First employed by the Woodruff Sleeping Car Company on May 15, 1886, he became a Pullman employee by absorption a few years later. But during his 46 years in active service as a Pullman conductor on the road, he never handled a sleeping car and, what is more, he never occupied a sleeping car berth. From start to finish, he was the conductor on the parlor car operated over the Central of New Jersey between Communipaw Station, N. J., and Lakewood. Not even on his vacations did he take advantage of his opportunities to try out Pullman sleeping car

service. Instead, he stayed at home. On his last day in service, Mr. Elliott was presented with a scroll containing the appreciative sentiments and the names of the regular passengers on his car. He also received a bag of gold.

## The Celebrated "Jawn Henry"

This is not quite a ghost story, but it has certain legendary qualities which make it interesting. It concerns a negro named "Jawn Henry." He was a giant, standing 6 ft. 4 in., and he made himself famous in the reconstruction days in the 1880's, when the "Big Bend" tunnel was cut through the mountains on the line constructed from Richmond, Va., to Cincinnati, Ohio, now part of the Chesapeake & Ohio. Among his race in the Virginia mountains, he was known as the greatest "steel driver" in history. There were other steel drivers, human predecessors of the pneumatic drill, but none so powerful as "Jawn Henry." Hearing of the construction of the Oak Mountain tunnel on the old Columbus & Western, now a part of the Central of Georgia, he took a job "whipping" steel there. Again he won the admiration of his race. But one day, so the legend has it, while "whipping down a steel" at the east end of the tunnel, he worked so hard and so fast that the steel melted at the point and stuck. This is reputed to have had something to do with "Jawn Henry's" death, for he dropped dead with hammer in hand at the side of his drill. The drill is still there, sticking in the hole which "Jawn Henry" was driving, and around Leeds, Ala., members of "Jawn Henry's" race will tell you that if you attempt to move the drill, his spirit will come and put a spell on you.

## Pontoon Bridge Tender

There are only three pontoon railroad bridges in the United States, and all are owned by the Chicago, Milwaukee, St. Paul & Pacific. The distinction of being tender of one of these pontoon spans belongs to James Doyle of Marquette, Iowa. It is a distinction, furthermore, which he has enjoyed since 1874, when a bridge with two floating channel spans was built across the Mississippi river between Marquette and Prairie du Chien, Wis., to take the place of car ferries which formerly handled Milwaukee trains in the crossing of the river. The trains still run over floating spans, and Mr. Doyle, as dean of the tenders who open them for the passage of river vessels and adjust their level to the rise and fall of the river, knows more about these odd structures than anyone else.



James Doyle (right), Who Has Tended the Milwaukee's Pontoon Bridge at Marquette, Iowa, Since 1874



# NEWS

## I.C.C. Opens Hearings on N. Y. Warehousing

Inquiry is Part 6 of the General  
Ex Parte 104 investigation of  
railroad practices

Hearings opened at New York on June 27 in connection with the Interstate Commerce Commission's investigation of warehousing and storage of property by carriers at the port of New York—Part 6 of the commission's general Ex Parte 104 inquiry into practices of carriers affecting operating revenues or expenses. Director W. P. Bartel of the I.C.C. Bureau of Service is presiding.

This part of the general inquiry, the notice of information to be sought at hearings states, "is directed toward establishing facts concerning all policies, practices, services and charges" in connection with warehousing and storage facilities offered by railroads at New York. The particular subjects to be considered are listed as follows:

- (1) All warehousing or storage afforded or performed on or in the lands, piers, buildings, structures, cars and other facilities and equipment, owned, leased, used, held, or controlled directly or indirectly by respondents.
- (2) The investments, direct or indirect, of respondents in lands, equipment and facilities used, or to be used, for such warehousing and storage or used in part for such warehousing and storage and in part for other purposes, and the return to respondents on such investments.
- (3) The return to respondents on investments, direct or indirect, by respondents in the securities of companies engaged, or proposing to engage, in said warehousing and storage.
- (4) Loans, advances, labor, services, allowances, compensation and gratuities made or given, directly or indirectly, by respondents to others engaged, or intending to engage, in such warehousing and storage, and the purpose thereof and the return thereon.
- (5) The costs and expenses of loading, unloading, handling, transferring, distributing, warehousing and storing freight assumed or borne, directly or indirectly, by respondents in connection with said warehousing and storage.
- (6) Rents or other form of compensation paid, directly or indirectly, by respondents for the use of property devoted to such warehousing and storage.
- (7) Rents or other form of compensation received, directly or indirectly, by respondents for the use of their property leased or granted to others and devoted to such warehousing and storage.
- (8) Storage-in-transit rules and privileges established or granted by respondents.
- (9) Rules, rates, charges and practices involved in said warehousing and storage.
- (10) All other practices involved in said storage and warehousing, and all other information which will enable the commission to determine whether respondents have complied in connection therewith with the various provisions of the Interstate Commerce Act, or other acts in addition or supplementary thereto.

An imposing array of counsel appeared at the hearing, representing independent warehousing and Atlantic port interests. While the notice confines the hearings to New York it is expected that the investigation will involve other Atlantic ports as well, because practices along the coast are generally governed by those of

the metropolis; counsel for the Port of New York Authority has petitioned for an extension of the inquiry to other Atlantic seaboard points.

Opening sessions were devoted to testimony of representatives of the I.C.C. who had for some time been gathering data from railroad files for their presentations and accompanying exhibits. I.C.C. Attorney W. J. Walsh offered the bulk of such evidence through R. B. Sturm, special agent of the I.C.C. Bureau of Inquiry. Following the commission's presentation will come the evidence of independent warehouses and other non-railroad interests and the railroads may then present witnesses.

Respondent carriers in the proceeding are listed as follows: Baltimore & Ohio; Brooklyn Eastern District Terminal; Bush Terminal; Central of New Jersey; Delaware, Lackawanna & Western; Erie; Hoboken Manufacturers; Jay Street Terminal; Lehigh Valley; Long Island; New York Central; New York Connecting; New York Dock; New York, New Haven & Hartford; New York, Ontario & Western; Pennsylvania; Staten Island Rapid Transit; West Shore.

### Bill to Penalize Thefts from Interstate Passenger Trains

The Senate passed on June 24 the bill, S. 4095, to amend the law which provides penalties for the theft of freight and express packages in process of interstate shipment to apply its provisions to thefts from passenger cars, including sleeping cars, or passengers on such cars while they are parts of interstate trains.

### I.C.C. Dismisses Complaint About Sunday Trains

The Interstate Commerce Commission has issued a formal order of dismissal of the complaint filed by Noah W. Cooper, of Nashville, Tenn., in which he asked the commission to require the railroads to cease operating trains on Sunday, but which he amended later to ask merely for one day of rest in seven.

### Joint Bars and Tie Plate Production

The production of steel angle bars in the United States in 1931, according to statistics issued by the American Iron & Steel Institute, amounted to 100,922 gross tons, compared with 116,686 tons in 1930; while steel fish plates and other rail joints aggregated 16,305 gross tons in 1931 and 19,080 tons in 1930. The output of steel tie plates amounted to 234,291 gross tons in 1931 compared with 399,872 tons in 1930 and the production of iron tie plates was 18,154 gross tons in 1931 compared with 27,574 tons in the previous year.

## Container Rate Cut Proposed by N. Y. C.

Its experience with charges prescribed by I. C. C. has been  
"most unfortunate"

Asserting that its experience during the past year with the basis of rates for merchandise in steel containers prescribed by the Interstate Commerce Commission has been "most unfortunate", the New York Central has applied to the commission for a modification of the order which it issued following its investigation of container service and for authority to establish a revised and reduced schedule of rates on an all-commodity basis, designed to meet motor truck competition on its lines east of Buffalo. Similar application has been made to the Public Service Commission of New York for intrastate shipments.

Following the report on the container investigation, the application says, the company revised its few container rates and published additional rates effective July 20, 1931, in compliance with the commission's order, which required that the rates should not be lower than third class or the highest carload class rate for any article in the container, and included other restrictions. However, experience demonstrated that these rates and the limitations in connection therewith are such that "we cannot compete successfully with motor trucks between many points" and it is stated that between points in New York state where trucking is very highly developed, the falling off in traffic handled in merchandise containers has been very marked.

The company also points out that other railroads have been permitted to establish all-commodity rates and asks that the discrimination involved in the container order should be removed. "The rates which are proposed have been established," the application says, "with the third class rates in mind. The short haul rates are obviously considerably lower than third class. To avoid departures from the aggregate-of-intermediates clause of the fourth section, the long haul rates have been established to clear the lowest possible combination, with the result that the long haul rates are lower than third class rates in varying amounts. This result comes about naturally because, as has been stated, the rates have been established upon a basis which after exhaustive investigation and extensive experience leads to the belief that they will be on a fair competitive basis with truck rates and service, and at the same time yield some profit. The traffic department of the New York Central has

given most serious thought to the rate structure applying on less than carload traffic in Official Classification territory in the light of conditions prior and subsequent to the decision in the container case and believes that under the proposed basis of rates the container can be developed into a very effective instrument in meeting truck competition. Other carriers, who do not use containers, are now free to establish rates on all commodities loaded in box cars; in truck-bodies; in ferry-trucks; in compartment cars, etc. This carrier is deprived of similar freedom merely by the circumstance that it uses containers of a specific type and dimensions which have been described by the commission in its order and upon which limitations have been imposed which, as experience has shown, are practically destructive of its use. The practical situation is that any carrier which uses a vehicle of transportation which it describes as not being a container is able to employ rates which are denied the container. This carrier desires to use containers and, therefore, requests the commission to modify its order to the extent necessary to enable it to establish for interstate application the rates proposed."

The charge per 100 lb., subject to a minimum weight of 6,500 lb. per container, based on net weight of contents will be, under the proposed revision, as follows from various points to New York: From Buffalo, 38 cents, from Rochester, 36 cents, from Syracuse, 33 cents; from Utica, 29 cents; and from Albany, 18 cents.

One of the objections to the commission's order is that its requirement "necessitates a complete description and tabulation of the contents of the container by the shipper, the classifying and rating of each of the items in the container by at least the shipper and the rail carrier; it also requires additional waybilling and accounting expenses due to such classification and rating." A table attached to the application shows that under the rates established pursuant to the commission's order the merchandise tonnage handled by the New York Central system in container cars has shown decreases each month as compared with the corresponding month of the previous year ranging from 58 per cent in September to 81 per cent in April, while the decrease in revenue has ranged from 12 per cent in September to 54 per cent in April. While the revenue did not decrease to the same extent as the tonnage, the explanation is given that during this period the New York Central handled considerable long haul traffic between points where merchandise container rates were not in effect prior to July 20, 1931.

#### C. F. Staples Dead

Charles F. Staples, director of the Bureau of Valuation of the Interstate Commerce Commission, died at Washington on June 24, at the age of 75. He was formerly a member and later chairman of the Minnesota Railroad and Warehouse Commission. In 1914 he became a member of the advisory board of the Interstate Commerce Commission appointed in connection with its valuation

work under the 1913 law and later was appointed assistant director of the Bureau of Valuation. After the death of C. A. Prouty he was appointed director of the bureau.

#### Freight Carried in Passenger Trains

To provide overnight service for less than carload shipments between Seattle, Wash., and Spokane, the Northern Pacific has fitted several freight cars for high-speed service and is moving the cars in passenger trains. The service is east-bound only and the cars are being handled in train No. 6 which leaves Seattle at 6 p.m. and arrives in Spokane at 6:45 a.m.

#### Intrastate Rate Cases Argued

Oral arguments were heard by the Interstate Commerce Commission on June 29 and the following day on four of the Intrastate rate cases, involving an investigation as to the failure of the states of Arkansas, Kentucky, Louisiana, and Oklahoma to allow increases in intrastate freight rates corresponding to the emergency increases in interstate rates authorized by the commission in Ex Parte No. 103. Paul Walker, of the Oklahoma commission, sat with the federal commission-

#### The I.C.C. Is Responsible for the Railroads' Plight

"When and where and what are the commission going to strike next? They are alone responsible for the serious plight of the railroads and now they have evolved a new theory to vindicate their past.

"First, in order to justify their rate structure, they claimed the roads were overcapitalized; after spending hundreds of millions of dollars they discovered that theory was wrong. Secondly, when they should have allowed the roads to earn 5¼ per cent they refused it on the grounds that the roads were too prosperous. Then when they realized that the railroads needed the increased rates, they discovered that business was too poor to grant it. Thirdly, now, when the railroads come for help, and everybody is willing to help them, even labor, and the mandate for that help has been given by Congress, the commission again follows obstructive tactics.

"Lastly, it is now apparent that every one of these loans from the Reconstruction Finance Corporation testifies mutely to the failure of the Interstate Commerce Commission to have regulated our transportation industry with ordinary ability and prudence. In self-defense, therefore, the only way the commission can rehabilitate itself is to blame the situation on the railroads and cut down fixed charges."

—Theodore Prince in the New York Times.

ers during the argument and M. G. Roberts, of the St. Louis-San Francisco, of counsel for the carriers, raised the question as to why railway officials should not participate with the commission also if a commissioner of one of the defendant states was allowed to do so. Mr. Walker was one of the committee of state commissioners who sat with the federal commission at the hearings in the interstate case last summer.

#### California-Chicago Freight Now on 141-Hr. Schedule

Railroads carrying fresh fruits and vegetables from the Imperial Valley, California to Chicago have reduced the schedule from 146 hr. to 141 hr., following requests made by directors of the California Growers' and Shippers' Protective League. Under the new schedule, effective July 5, all shipments leaving between 3 a.m. and 7 p.m. will arrive in Chicago at 2 a.m. the seventh day.

#### Unions Seek Aid for Family Heads

A plan for the creation of a federal corporation to finance unemployed heads of households in amounts not exceeding \$500 was approved by the Railway Labor Executives' Association, composed of the heads of 21 railroad labor organizations, at a meeting at Cleveland, Ohio, on June 23. According to the plan, the corporation for the unemployed will be similar to the Reconstruction Finance Corporation, and will be designed to provide emergency loans for the purchase of necessities of life by unemployed heads of households who are ordinarily capable of self-support.

#### Strike Called on S. P. of Mexico

Employees of the Southern Pacific of Mexico went on strike on June 27 in protest against a proposed 10 per cent wage cut. When the railroad petitioned the federal board of arbitration and conciliation for permission to reduce wages, the unions voted to call a strike unless the petition was withdrawn.

While the strike forced the suspension of operations on the entire system, train service employees were instructed by the strike committee of the Confederation of Transportation and Communication to operate their trains to their residential terminals. No equipment was abandoned between terminals.

The Federal Board of Arbitration and Conciliation, which was unable to effect a settlement between the railroad and its workers, authorized the use of one telegrapher at each division point, two dispatchers for possible troop train movement, one carpenter and two assistants at the Mal Paso bridge now under construction near Barrancas, Jal., several tunnel watchmen near Barrancas, two roadmasters and all trackwalkers, and the office forces of the president and the general manager of the company.

#### Pullman Company Cuts Rates on Sections

Following approval granted by the Interstate Commerce Commission on June 23, the Pullman Company on July 1 placed the following rates in effect:

Reduced section rate for two-passenger



# YOU CAN'T AFFORD To Wear Out OLD POWER



"Many inefficient locomotives have been retired and the number of types in use materially reduced. This meant savings in fuel and up-keep. At the same time the reduction in the number of types of locomotives resulted in time and labor savings in repair shops. To replace the discarded equipment locomotives were installed that cut fuel costs at the rate of \$2,000,000 annually."

—From an annual report of  
a large freight carrier.

Locomotives recently built are reducing operating costs by 25% compared with locomotives five to ten years old. Can you afford to run your present equipment in view of the performance of modern locomotives?



**LIMA LOCOMOTIVE WORKS, Incorporated LIMA, OHIO**



use—two passengers may occupy a section at the lower berth rate, plus three-fourths of the price of the upper, when the lower (with the upper up) is used for night occupancy. This replaces the rate of full charge for both lower and upper.

**Special overnight rate:** Two through passengers in a lower berth may purchase, on the train, the section privilege for overnight use from 9 p.m. to 8 a.m. upon application to the Pullman conductor. The charge for this additional overnight accommodation for double occupancy will not exceed \$2.70.

A section occupied by an adult and a child under 12 for whom full railroad transportation is not required will be sold at the single occupancy rate.

**Overnight single occupancy section rate:** A through lower berth passenger may purchase on the train from the Pullman conductor at a reduced maximum rate, the entire section privilege for overnight use from 9 p.m. until 8 a.m. The charge for this additional overnight accommodation for single occupancy will not exceed \$1.80.

### Cent-a-Mile Excursion to Yellowstone

About 250 persons took advantage of a one-cent-a-mile coach excursion operated by the Chicago, Milwaukee, St. Paul & Pacific from Chicago, Milwaukee and the Twin Cities to Yellowstone National Park on June 26. This excursion was an experiment to determine whether the traveling public would be interested in this type of trip. From Chicago it required six days. To assist in the experiment, other roads operating between Chicago and Yellowstone refrained from running similar excursions in competition with that of the Milwaukee. The majority of the passengers came from Milwaukee and the Twin Cities, Chicago furnishing the smallest number.

At St. Paul the excursion cars were placed in an extra train and were run to Yellowstone with a dining car and a recreation car. At Aberdeen, S. D., an open observation car was added. The comfort of passengers was assured by loading the cars to only 50 per cent of their capacity and by assigning seats. Porters were provided to take care of the wants of passengers.

While the Yellowstone Transportation and Lodge companies did not reduce their rates, it was possible to fix a total cost of \$79 for the trip, including meals enroute, an overnight stop at the Twin Cities and transportation, meals and lodging through the park.

### The Canadian Roads in May

Net operating revenues of the Canadian Pacific for May amounted to \$737,364, as compared with \$1,074,249 in May of last year, a decrease of \$336,884. Gross revenues for the month showed a decrease of \$2,788,473 from those for May of last year, and expenses for the month were reduced by \$2,451,589.

For the five months of the year ended with May, net revenues amounted to \$3,673,263, as against \$4,886,535 in the corresponding five-month period of last year, a decrease of \$1,213,272. Gross for the five-month period showed a decrease of

### A Message to Lumbermen and Dealers

Mr. Dealer, this trucking of lumber is several years old in other parts of the country, and this has long since been demonstrated—that in every district it has invaded, lumber trucking is just another of the damnations of the retail lumber business. The dealer who encourages it fails to consider that the same service that enables him to cut down his stocks, also enables the little contractor, the saw and hammer artist, the corner grocery store, and even the gasoline station, to go into the retail lumber business without any investment and become your competitors.

Mr. Sawmill Man, you haven't even a suspicion of a hope that anything like real prosperity will ever come back to your business until the railroads—starved for the past several years—come back into the market. Your prosperity in the future is directly hinged upon his. Kill his business and there isn't a chance in the world of your ever finding a market for the lumber he has been buying since your business began. Take the railroad business away from your industry, and it's a blowed-up industry for all time to come.

—Jack Dionne in the "Gulf Coast Lumberman."

\$12,039,503, while expenses were cut by \$10,826,230.

Following are the gross revenues, expenses and net for the month of May, and for the five months of the fiscal year ended with May:

	1932	1931	Dec.
Gross	\$ 9,517,355	\$12,305,828	\$ 2,788,473
Exp.	8,779,990	11,231,579	2,451,589
Net	\$ 737,364	\$ 1,074,249	\$ 336,884
FIVE MONTHS			
Gross	\$47,548,497	\$59,588,001	\$12,039,503
Exp.	43,875,234	54,701,465	10,826,230
Net	\$ 3,673,263	\$ 4,886,535	\$ 1,213,272

A decrease in gross revenues of \$3,918,273 in May, 1932, as compared with May of last year, was more than offset by reduced operating expenses of the Canadian National. Gross revenues in May were \$11,686,354. Operating expenses were \$10,954,559, a reduction of \$4,209,378 from the operating expenses figure of May, 1931. Net revenue for May, 1932, therefore showed an increase over May, 1931, of \$291,105 to reach a total of \$731,794.

For the five months period, January to May 31, gross revenues of \$57,750,742 showed a decrease of \$15,288,654. The reduction in operating expenses over the period almost kept pace with this. Operating expenses for the 1932 period were \$56,569,923, a reduction of \$15,035,431. This left net revenue for the 1932 period of \$1,180,818, a decrease of \$253,222 for

the 1932 period as against the same months of last year.

### Special July 4 Excursions on the New York Central

With the object of attracting holiday traffic over the week-end of July 2-4, the New York Central is advertising a number of popular excursions at unusually low prices. One of these, designed especially for that particular time, will be operated from Weehawken, N. J., to Catskill mountain points, via the West Shore, with a flat rate of \$3.50 covering the round trip to all points from West Hurley, N. Y., to Stamford, inclusive. Tickets for this excursion are available in coaches leaving Weehawken at 2.35 a. m. or 8.30 a. m., Eastern standard time, on Sunday, July 3; for the return trip, any regular train on Monday, July 4, may be used.

A one-day excursion up the Hudson river from New York and Yonkers to Albany, N. Y., Troy, and Schenectady, with tickets available on several trains, is offered for July 3 and 10 at a round-trip rate of \$2, increasing to \$3.50 if the return trip is made on July 4.

A more extended trip to Saranac Lake, Lake Placid or Tupper Lake, all in the Adirondacks, provides for a Saturday night departure from New York. The fare is \$6 if the return is made on Sunday night, July 3; \$8 if it is postponed to Monday, July 4.

The New York Central is also offering an all-expense cruise through Lakes Champlain and George, \$25.75 covering railroad and steamer fares, lower Pullman berth, meals, hotel accommodations and a sightseeing tour in Burlington, Vt. For the current week-end, this trip will leave New York on Saturday evening, returning on Monday, but similar tours, leaving New York on Friday, will be operated each week-end throughout July and August.

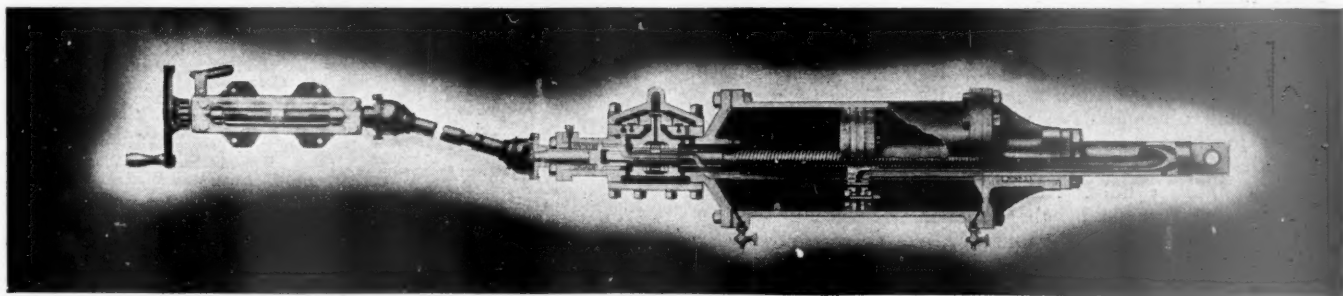
### Train Control Hearings

Hearings on automatic train control before examiners of the Interstate Commerce Commission on petitions of the Northern Pacific and the Union Pacific were held at St. Paul, Minn., on June 20, and at Omaha, Neb., on June 21. That of the Northern Pacific at St. Paul before Special Examiner S. N. Mills was on the petition of that road to be relieved from the requirement of operation of the train stop system now in service between Mandan, N. D., and Glendive, Mont. H. E. Stevens, vice-president, B. Blum, chief engineer, and Stanley Law, signal engineer of the road, appeared as the principal witnesses, to show that the present volume of traffic does not justify the expense required for the operation of the train control. The number of trains has been reduced by eliminating certain passenger trains and the number of freight trains has been reduced through the use of larger locomotives as well as by a falling off in business. The road believes that automatic block signal protection is adequate and prefers to use the money required for train control for other purposes such as highway crossing signals and additional automatic signals on lines not now so protected.

Continued on next left-hand page



15,000



## FRANKLIN POWER REVERSE GEARS Control Locomotive Power

Hand control of locomotive power became obsolete when designers began the revolution in construction that brought the high power locomotive.

Precise and positive control of cut-off is an essential to economical locomotive operation.

On 15,000 locomotives Franklin Power Reverse Gears are proving their ability to control cut-off accurately and at low fuel and maintenance cost.

Apply Franklin control and get better performance from your men, fuel and locomotives.



### FRANKLIN RAILWAY SUPPLY CO., INC.

NEW YORK

CHICAGO

MONTREAL

The hearing of the Union Pacific, also before Special Examiner S. N. Mills, was on the petition to use the automatic cab signal system in lieu of automatic train control on the territory between North Platte, Neb., and Cheyenne, Wyo. W. M. Jeffers, vice-president, and F. W. Pfefing, signal engineer of the road, appeared as the principal witnesses, testifying that adequate protection will be provided by cab signals in conjunction with the wayside automatic block signals and that there will be a material reduction in the maintenance expense for equipment on the locomotives and also in the cost of equipping new locomotives.

### 25,000 Passengers Took Advantage of Southern's Cent-a-Mile Rate

More than 25,000 persons took advantage of the cent-a-mile rates offered by the Southern on June 18 in commemoration of the 38th anniversary of its incorporation. The low-fare tickets, with a return limit of eight days, were available for journeys between all points on the Southern and also to certain destinations on connecting lines. Accompanying concessions were made by the Pullman Company which for the "first time in history" made a general reduction in its rates in co-operation with such an event—Pullman round-trip tickets were reduced 25 per cent.

A large part of the success which attended the event was due to the widespread manner in which it was advertised and publicized. The advertising campaign was very carefully worked out and included the use of the radio and the daily and weekly newspapers; also,

posters, envelope fillers and hand cards in the form of a large cent were distributed. All of these called upon the public to "Take a train ride! Anniversary day is train travel day on the Southern Railway System." Attention-getting posters with cartoons in color emphasized the fact that a 100-mile journey was available for \$1, a 200-mile trip for \$2, etc. One of the cartoons, reproduced herewith, was based on the idea that the rate was so low as to permit family groups to take advantage of the event. The 25,000 passengers required extra equipment on regular runs and the operation of a number of extra passenger trains.

### Meetings & Conventions

The following list gives names of secretaries, date of next or regular meetings and places of meetings.

- AIR BRAKE ASSOCIATION.**—T. L. Burton, Room 5605, Grand Central Terminal Building, New York City.
- ALLIED RAILWAY SUPPLY ASSOCIATION.**—F. W. Venton, Crane Company, 836 S. Michigan Ave., Chicago. To meet with Air Brake Association, Car Department Officers Association, International Railroad Master Blacksmiths' Association, International Railway Fuel Association, International Railway General Foremen's Association, Master Boiler Makers Association and the Traveling Engineers' Association.
- AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.**—W. R. Curtis, F. T. R., M. & O. R. R. Chicago, Ill.
- AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.**—E. L. Duncan, 332 S. Michigan Ave., Chicago.
- AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.**—W. C. Hope, C.R.R. of N. J., 143 Liberty St., New York. Annual meeting, October 24-25, 1932, St. Louis, Mo.
- AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.**—F. O. Whiteman, Room 800, 1017 Olive St., St. Louis, Mo.
- AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.**—E. A. Abbott, Poole Bros., Inc., 85 West Harrison St., Chicago. Next meeting, Jan. 21, 1933.

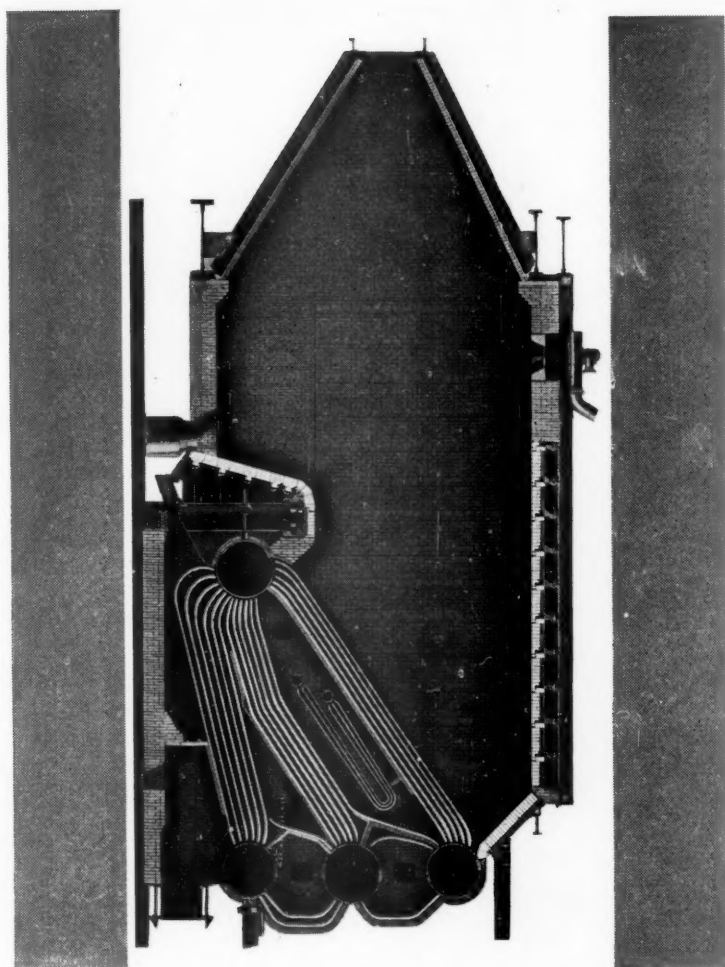
- AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.**—F. R. Borger, C. I. & L. R. R., 836 Federal St., Chicago.
- AMERICAN ELECTRIC RAILWAY ASSOCIATION.**—Guy C. Hecker, 292 Madison Ave., New York.
- AMERICAN RAILWAY ASSOCIATION.**—H. J. Forster, 30 Vesey St., New York, N. Y.
- Division I.—Operating.**—J. C. Caviston, 30 Vesey St., New York.
- Freight Station Section.**—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago.
- Medical and Surgical Section.**—J. C. Caviston, 30 Vesey St., New York.
- Protective Section.**—J. C. Caviston, 30 Vesey St., New York.
- Safety Section.**—J. C. Caviston, 30 Vesey St., New York.
- Annual meeting.**—October 4-6, 1932, Hotel Washington, Washington, D. C.
- Telegraph and Telephone Section.**—W. A. Fairbanks, 30 Vesey St., New York.
- Division II.—Transportation.**—G. W. Covert, 59 East Van Buren St., Chicago.
- Division III.—Traffic.**—J. Gottschalk, 143 Liberty St., New York.
- Division IV.—Engineering.**—E. H. Fritch, 59 East Van Buren St., Chicago. Annual meeting, March 14-16, 1933. Exhibit by National Railway Appliances Association.
- Construction and Maintenance Section.**—E. H. Fritch, 59 East Van Buren St., Chicago.
- Electrical Section.**—E. H. Fritch, 59 East Van Buren St., Chicago.
- Signal Section.**—R. H. C. Balliet, 30 Vesey St., New York.
- Division V.—Mechanical.**—V. R. Hawthorne, 59 East Van Buren St., Chicago.
- Equipment Painting Section.**—V. R. Hawthorne, 59 East Van Buren St., Chicago.
- Division VI.—Purchases and Stores.**—W. J. Farrell, 30 Vesey St., New York.
- Division VII.—Freight Claims.**—Lewis Pilcher, 59 East Van Buren St., Chicago.
- Division VIII.—Motor Transport.**—George M. Campbell, 30 Vesey St., New York.
- Car Service Division.**—C. A. Buch, 17th and H. Sts., N. W., Washington, D. C.
- AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.**—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Annual meeting, October 18-20, 1932, Royal York Hotel, Toronto, Ont. Exhibit by Bridge and Building Supply Men's Association.
- AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.**—J. A. Senter, Ind. Agt., N. C. & St. L. Ry., Nashville, Tenn.
- AMERICAN RAILWAY ENGINEERING ASSOCIATION.**—Works in co-operation with the American Railway Association, Division IV.—E. H. Fritch, 59 East Van Buren St., Chicago. Annual meeting, March 14-16, 1933. Exhibit by National Railway Appliances Association.
- AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.**—Miss E. Kramer, M-K-T Employees Magazine, St. Louis, Mo.
- AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—G. G. Macina, C., M., St. P. & P. R. R., 11402 Calumet Ave., Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.—E. E. Caswell, Union Twist Drill Co., 11 S. Clinton St., Chicago.
- AMERICAN SHORT LINE RAILROAD ASSOCIATION.**—R. E. Schindler, Union Trust Bldg., Washington, D. C.
- AMERICAN SOCIETY OF MECHANICAL ENGINEERS.**—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, *Railway Age*, 30 Church St., New York.
- AMERICAN WOOD PRESERVERS' ASSOCIATION.**—H. L. Dawson, 1104 Chandler Building, Washington, D. C. Annual meeting, January 24-26, 1932, Chicago, Ill.
- ASSOCIATION OF RAILWAY CLAIM AGENTS.**—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual meeting, June 21, 1933, Chicago.
- ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.**—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Station, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.
- ASSOCIATION OF RAILWAY EXECUTIVES.**—Stanley J. Strong, Transportation Building, Washington, D. C.
- BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.**—S. A. Baber, High Grade Manufacturing Co., 10418 St. Clair Ave., Cleveland, Ohio. Meets with American Railway Bridge and Building Association.
- CANADIAN RAILWAY CLUB.**—C. R. Crook, 2276 Wilson Ave., N. D. G., Montreal, Que. Regular Meetings, second Monday of each month, except June, July, and August, Windsor Hotel, Montreal, Que.
- CAR DEPARTMENT OFFICERS ASSOCIATION.**—A. S. Sternberg, M. C. B. Belt Ry. of Chicago, 7926 South Morgan Street, Chicago.
- CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.**—J. W. Krause, Room 299, 610 So. Main St., Los Angeles, Cal. Regular meetings, second



Ingenious Merchandising Methods Were Largely Responsible for Heavy Patronage

Continued on next left-hand page





## ALL INDUSTRY Uses American Arch Company Products

In great heating furnaces in the steel mills, in the newest oil stills, in the most modern boiler plants you will find American Arch Company suspended Roofs, Arches and Air-Cooled side walls.

All industry draws on the fund of combustion knowledge that is possessed by American Arch Company engineers.

As for the past 21 years, American Arch Company engineers are still applying this combustion experience to railroad problems—perfecting new Arch designs to meet new firebox conditions.

While most important, this engineering service is only one link in the chain of a satisfactory Arch Brick supply.

American Arch Company is equally well qualified to furnish every other element.

### AMERICAN ARCH COMPANY

INCORPORATED

NEW YORK

CHICAGO

## Foreign

### Loder Elected Chairman of Southern of Great Britain

Gerald W. Erskine Loder, deputy chairman of the board of the Southern Railway Company of Great Britain, has been elected chairman, succeeding the late Brigadier-General the Hon. Everard Baring, whose death in London on May 7 was reported in the *Railway Age* of May 14. Mr. Loder, who was educated at Eton and Trinity, Cambridge, and who served as a member of the House of Commons from 1889 to 1905, has been connected with the Southern and its predecessors since 1896, when he was first elected a director of the London, Brighton & South Coast. He was chairman of that company at the time of amalgamation, at the end of 1922; and upon the formation of the present Southern group in 1923 he was elected joint deputy chairman of the new board.

### Steel Sleepers on British Railways

During the last three or four years, according to an article in "Railway Newsletter," official publicity organ of the British railways, extensive experiments have been carried out by the railways of Great Britain in the use of steel sleepers. As a result of these experiments, nearly half a million such sleepers are now laid in short lengths of road in different parts of the country where they are being subjected to exhaustive tests.

These tests include as great a variation as possible in class, speed and density of traffic, grade and alinement of track, and composition of ballast. The principal technical difficulties are the inability to use steel sleepers on electrified or track-circuited lines and crossing work, and the reluctance to utilize them in tunnels and at water troughs until further experience is gained of their behavior. There is nothing to stand in the way of extending the use of steel sleepers if they prove

Monday of each month, except July, August and September, Room 299, 610 So. Main St., Los Angeles. Club not active at present time.

**CAR FOREMAN'S ASSOCIATION OF CHICAGO.**—G. K. Oliver, 2514 W. 55th St., Chicago. Regular meetings, second Monday of each month, except June, July, and August, Auditorium Hotel, Chicago.

**CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.**—J. F. Brady, Main and Barton Sts., St. Louis, Mo. Regular meetings first Tuesday of each month, except July and August, American Hotel Annex, 6th and Market Sts., St. Louis, Mo.

**CENTRAL RAILWAY CLUB OF BUFFALO.**—T. J. O'Donnell, 1817 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

**CINCINNATI RAILWAY CLUB.**—D. R. Boyd, 2920 Utopia Place, Hyde Park, Cincinnati, Ohio. Regular meetings second Tuesday in February, May, September and November, Hotel Gibson, Cincinnati, O.

**CLEVELAND RAILWAY CLUB.**—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Regular meetings second Monday of each month, except June, July and August, Auditorium, Brotherhood of Railroad Trainmen's Building, West 9th St., and Superior Ave., Cleveland.

**INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.**—W. J. Mayer, Michigan Central R. R., Detroit, Mich.

**INTERNATIONAL RAILWAY CONGRESS.**—January 19-30, 1933, Cairo, Egypt.

**INTERNATIONAL RAILWAY FUEL ASSOCIATION.**—C. T. Winkless, Room 700, La Salle Street Station, Chicago.

**INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.**—Wm. Hall, 1061 W. Wabasha St., Winona, Minn.

**MASTER BOILER MAKERS ASSOCIATION.**—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

**NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.**—James B. Walker, 270 Madison Ave., New York. Annual meeting, November 15-18, 1932, Hot Springs, Ark.

**NATIONAL ASSOCIATION OF RAILROAD TIE PRODUCERS.**—Roy M. Edmonds, 1252 Syndicate Trust Bldg., St. Louis, Mo.

**NATIONAL RAILWAY APPLIANCE ASSOCIATION.**—C. W. Kelly, Suite 322, 910 South Michigan Ave., Chicago. Exhibit during A.R.E.A. Convention, March 13-16, 1933, Coliseum, Chicago.

**NATIONAL SAFETY COUNCIL.**—Steam Railroad Section; J. L. Walsh, (Honorary vice-chairman), Supt. Safety, M.-K.-T. R. R. Dallas, Tex. Annual meeting, October 4-6, 1932, Hotel Washington, Washington, D. C.

**NEW ENGLAND RAILROAD CLUB.**—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Copley Plaza Hotel, Boston, Mass.

**NEW YORK RAILROAD CLUB.**—D. W. Pye, 30 Church St., New York. Regular meetings third Friday of each month, except June, July and August, 29 W. 39th St., New York City.

**PACIFIC RAILWAY CLUB.**—W. S. Wollner, P. O. Box, 3275, San Francisco, Cal. Regular meetings second Thursday of each month, alternately in San Francisco and Oakland.

**RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.**—E. R. Woodson, Transportation Building, Washington, D. C. Annual meeting, August 1932, Hotel Statler, Buffalo, N. Y.

**RAILWAY BUSINESS ASSOCIATION.**—First National Bank Building, Chicago, Ill.

**RAILWAY CLUB OF PITTSBURGH.**—J. D. Conway, 1841 Oliver Building, Pittsburgh, Pa. Regular meetings, fourth Thursday of each month except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

**RAILWAY ELECTRICAL SUPPLY MANUFACTURERS ASSOCIATION.**—Edward Wray, 9 S. Clinton St., Chicago. Meets with Association of Railway Electrical Engineers.

**RAILWAY FIRE PROTECTION ASSOCIATION.**—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting October 18-20, 1932, Hotel Cleveland, Cleveland, Ohio.

**RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.**—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division, Purchases and Stores Division and Motor Transport Division, American Railway Association. No exhibit at 1932 conventions.

**RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.**—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A. Division I.

**RAILWAY TREASURY OFFICERS ASSOCIATION.**—L. W. Cox, 1428 Broad Street Station Building, Philadelphia, Pa. Annual meeting, October 21, 1932, New York City.

**ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.**—T. F. Donahoe, Gen. Supvr. Road, Baltimore & Ohio, Pittsburgh, Pa. Annual meeting, September 20-22, 1932, Hotel Stevens, Chicago. Exhibit by Track Supply Association.

**ST. LOUIS RAILWAY CLUB.**—B. W. Frauenthal, Drawer 24, M. P. O., St. Louis, Mo. Regular meetings, second Friday of each month, except June, July and August, Statler Hotel, St. Louis.

**SIGNAL APPLIANCE ASSOCIATION.**—Meets with A. R. A. Signal Section.

**SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.**—A. T. Miller, 4 Hunter St., S.E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta.

**SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.**—R. G. Parks, A. B. & C. Ry., Atlanta, Ga.

**SUPPLY MEN'S ASSOCIATION.**—E. H. Hancock, Treasurer, Louisville Varnish Co., Louisville, Ky. Meets with A. R. A. Division V. Equipment Painting Section.

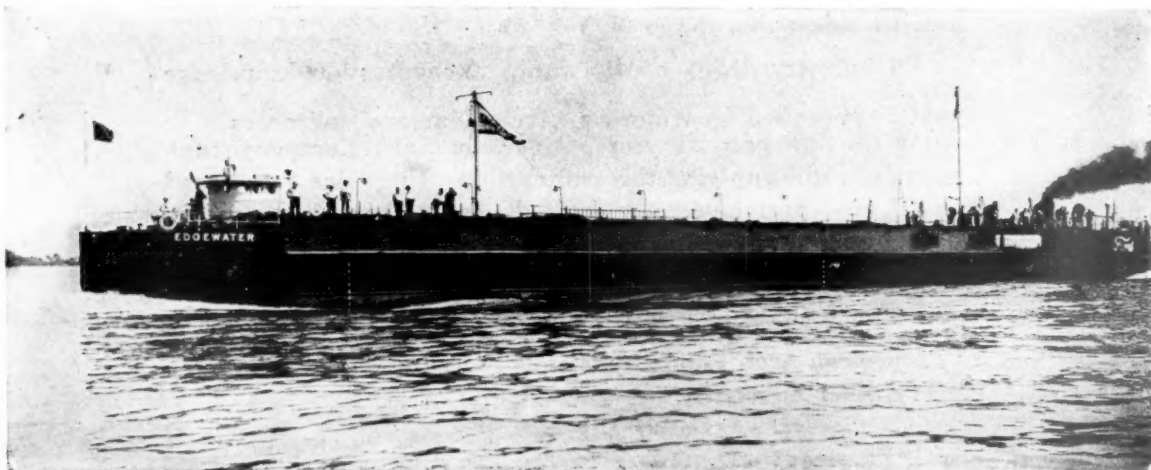
**TORONTO RAILWAY CLUB.**—J. A. Murphy, P. O. Box 8, Terminal "A," Toronto. Regular meetings first Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

**TRACK SUPPLY ASSOCIATION.**—L. C. Ryan, Oxweld Railroad Service Co., Carbon & Carbide Building, Chicago. Meets with Roadmasters and Maintenance of Way Association.

**TRAVELING ENGINEERS' ASSOCIATION.**—W. O. Thompson, 1177 East 98th St., Cleveland, O.

**WESTERN RAILWAY CLUB.**—J. H. Nash, Dri-Stream Valve Sales Corp., 122 S. Michigan Ave., Chicago. Regular meetings third Monday of each month, except June, July, August and September, Hotel Sherman, Chicago.

\* \* \* \*



Based on the Cost to the State of \$3.80 for Every Ton of Freight Moved Through the State Barge Canal, New York Taxpayers Make Henry Ford a Present of \$6,840 Every Time This 1800-Ton Vessel Moves Through the Canal Between Oswego and Albany

Continued on next left-hand page



# ALCO

## WELDED TYPE

# The ECONOMICAL STAYBOLT

## PRACTICAL RELIABLE

Our line includes more than the welded and threaded bolt assemblies. We make rigid water-space, rigid radial, rigid hollow drilled, button head, and taper end crown stays.

In all these bolts, ALCO dependable construction plus quantity production can save you money.

**American Locomotive Company**  
30 Church Street New York N.Y.

satisfactory, and there are very many reasons why railways would favor their use in preference to importing timber sleepers, about 4,500,000 of which are used every year.

Apart from the initial increase in balast used, the article points out, the cost of laying steel-sleeper track is little above that for timber track. When reproducing steel track this initial charge would not be repeated. Maintenance costs are slightly lower owing mainly to the absence of chair bolts or screws, which are not required with steel sleepers in which the sleeper and chair are either cast or welded together during manufacture or made in one piece.

The outstanding consideration, however, is the cost of subsequent renewal, the saving per mile for every year for which replacement of track can be deferred representing about £120.

The life of a steel sleeper in Great Britain, in view of heavy axle loads and high speeds, has yet to be ascertained, and it may be found that atmospheric and other conditions affect their life.

It is, however, generally conceded that steel sleepers should give at least the maximum life of a creosoted timber sleeper. The average life of the latter is about 22 years, and if that of steel sleepers proves to be 30 years, the renewal charges would be less and the value of recoverable materials in favor of steel sleepers.

### New Zealand Railways in 1930-31

A deficit, equivalent after interest charges, to \$7,629,430 was reported by the New Zealand Government Railways for the year ending March 31, 1931. This represents an increase of \$1,730,550 over the 1929-30 deficit of \$5,898,880, the rise being accounted for by the \$1,171,381 drop in net revenue, the \$599,112 increase in interest charges and the \$39,944 by which the credits for developmental lines failed in 1929-30 to meet the operating losses on such lines. The losses on these so-called developmental branch lines now enter the operating accounts; the credits therefor were eliminated by the Finance Act, 1929, which also made other accounting adjustments as outlined in the *Railway Age* of March 21, 1931, page 607.

Not since the year ending March 31, 1926, have the New Zealand railways earned a surplus after interest charges; the net profit for that year was \$384,842. Since then the net revenues, interest charges and deficits have been as follows:

	Net Revenues	Interest Charges	Deficit
1926-27	\$9,466,179	\$9,951,519	\$485,339
1927-28	8,957,951	10,377,322	1,419,371
1928-29	9,246,143	11,353,601	2,107,458
1929-30	4,485,538	10,384,418	5,898,880
1930-31	3,354,100	10,983,530	7,629,430

Note: Par value (\$4.87) used in converting pounds to dollars.

By 1930 the burden of this mounting deficit had become so great that the cash resources of the railways, the report says, "had been exhausted by the payments which had required to be made to the Consolidated Fund to meet interest." Accordingly, an amendment to the Finance Act, 1929, authorized the Minister of Finance to reduce the interest charges of the railways by the amount which the net revenues fell short of normal interest

requirements. The amount actually paid for interest during 1930-31 was, therefore, \$3,335,950 or slightly less than the net revenues of the year.

In his general comment on the year's results the Minister of Railways suggests that "In comparing the net revenue for 1930-31 with the results of previous years it is necessary to make due allowance for the variations in enactments, regulations and policy applying to the finance of the Working Railways Account. It must also be borne in mind that since 1926 systematic provision has been made for depreciation in a manner which has not been adopted by the majority of state railways in other parts of the Empire and which prior to that year had not been adopted in New Zealand."

Commenting upon the \$2,318,359 reduction in operating expenses as compared with the previous year the Minister says that "there is no doubt that an even greater extent of reduction in the expenditure might have been achieved if the staff adjustments that were found possible had been rigorously pursued regardless of any other consideration than reduction of expenditure within the department. It was felt that, having regard to the general state of the labor market and to the very great distress that was likely to be occasioned if a sudden and extensive reduction in staff had been decided upon, a steady process of more or less gradual reduction was justified even though the Department were involved in some expense in so doing." In this connection the report shows that the average number of employees during the year under review was 18,840 as compared with an average of 19,410 during the year ending March 31, 1930. Of this number there was in 1930-31 an average of 1,435 employed on work chargeable to capital as compared with an average of 1,382 so employed in 1929-30.

Gross revenues for the year amounted to \$36,873,385; operating expenses were \$33,519,285, and net revenues \$3,354,100. These compare with 1929-30 gross revenues of \$40,323,181, operating expenses of \$35,837,643, and net revenues of \$4,485,538. The 1930-31 gross revenues from railway operations alone were \$33,025,360 as compared with a 1929-30 figure of \$36,398,346; the railway operating ratio increased to 94.47 in 1930-31 from 91.62 in the previous year.

During the last fiscal year there was an average of 3,303 miles of line open for traffic at a capital cost per mile of \$88,761. This compared with an average investment per mile of \$73,888 on March 31, 1926. Among the facilities completed during the year under review is the new station at Auckland which was opened on November 24, 1930.

The present report is the last to be submitted by H. H. Sterling in the capacity of general manager, reporting to the Minister of Transport. In accordance with recommendations of a Royal Commission which made a study of New Zealand railways, the railway department has been "depolitized" and operations placed under a Government Railways Board as provided in the Government Railways Amendment Act, 1931. Mr. Sterling, on

December 6, 1931, assumed the chairmanship of this new board and P. G. Roussell, general superintendent of transportation, was promoted to general manager. The direct responsibility for the operations of the railways now devolves upon the Government Railways Board.

## Equipment and Supplies

### IRON & STEEL

THE DELAWARE, LACKAWANNA & WESTERN has ordered 1,000 tons of 130 lb. rail and fastenings for July delivery from the Bethlehem Steel Company. This is in addition to 7,500 tons of rail laid this year.

THE ILLINOIS CENTRAL has ordered 525 tons of structural steel for a bridge at West Point, Ky., from the American Bridge Company. An inquiry for 500 tons was reported in the *Railway Age* of June 18.

## Supply Trade

The Sterling Motor Truck Company, Milwaukee, Wisc. has completed negotiations for the acquisition of the motor truck division of the LaFrance-Republic Sales Corporation, Alma, Mich.

Dr. J. A. L. Waddell and Dr. Shortridge Hardesty have become associated with Parsons, Klapp, Brinckerhoff & Douglas, New York, as consulting engineers to their bridge department.

Joseph T. Ryerson & Son, Inc., Chicago, is planning to celebrate the ninetyeth anniversary of its establishment on November 1. The business was started in November, 1842, by Joseph Ryerson.

W. E. Ridenour, first vice-president and chief chemist of the Bird-Archer Company, with headquarters at Philadelphia, Pa., has been elected president to succeed P. B. Bird, who will remain as chairman of the board, at New York, and C. A. Bird is now first vice-president and secretary, with headquarters at New York.

David G. Kerr, for the past 24 years vice-president of The United States Steel Corporation, with jurisdiction over the ore, coal and limestone interests of the corporation and their distribution to manufacturing plants, has requested that he be relieved of his duties on August 1, retiring under the United States Steel Corporation's pension plan. Edwin E. Ellis, in charge of special mineralogical research for the corporation and president of the Universal Exploration Company, a subsidiary of the corporation has been appointed vice-president of the United States Steel Corporation to succeed Mr. Kerr.

Continued on next left-hand page





## BETTER MATERIALS WILL HELP KEEP THEM AWAY FROM THE BACK-SHOP

Rising maintenance costs can best be met by keeping locomotives out of the shop as long as possible. Longer lasting materials are one means to this end. « Greater strength, greater fatigue and corrosion resistance and lighter weight are obtainable in the alloys developed specifically for railroad work by the metallurgists of Republic Steel Corporation. « For case-hardened parts Agathon Nickel Iron provides a far tougher core which means fewer breakages. « Where axles, rods and pins encounter higher stresses, there are Agathon Alloy Steels of greater strength and fatigue resistance to meet the new demands. « Alloy staybolts of both steel and iron are furnished by Republic to supply the increased fatigue resistance and greater uniformity of composition that reduce staybolt breakage. « Toncan Iron has an increased corrosion resistance that makes it preferred for boiler tubes, firebox sheets, car plates, and everywhere that corrosion is troublesome. « Use these better materials to control the rising tide of equipment maintenance.

Toncan Iron Boiler Tubes, Pipe, Plates, Culverts, Rivets, Staybolts, Tender Plates and Firebox Sheets • Sheets and Strip for special railroad purposes • Agathon Alloy Steels for Locomotive Parts Agathon Engine Bolt Steel • Nitralloy • Agathon Iron for pins and bushings

Agathon Staybolt Iron • Climax Steel Staybolts • Upson Bolts and Nuts • Track Material, Maney Guard Rail Assemblies • Enduro Stainless Steel for dining car equipment, for refrigeration cars and for firebox sheets • Agathon Nickel Forging Steel (20-27 Carbon)



The Birdsboro Steel Foundry & Machine Company of Birdsboro, Penna., has manufactured and is prepared to supply under license, Toncan Copper Molybdenum Iron castings for locomotives.

C E N T R A L A L L O Y D I V I S I O N  
**REPUBLIC STEEL CORPORATION**  
M A S S I L L O N O H I O



**Frank C. Jones**, formerly vice-president and general manager of **The Okonite Company**, has been elected president and general manager, succeeding **H. Durant Cheever**, former president, who has been advanced to chairman of the board.

Mr. Cheever, who is retiring from the presidency, has been connected with The



H. Durant Cheever

Okonite Company for 44 years, joining the New York office of that organization immediately after his graduation from Harvard University, Cambridge, Mass., in 1888. He was subsequently elected treasurer of the company, and was later advanced to the presidency, which office he filled until his present appointment as chairman of the board.

Mr. Cheever's successor, Mr. Jones, has had a somewhat similar career, though at a later period. He prepared at the Noble and Greenough School, Boston, Mass., and was a member of the Class of 1910 at Harvard. Following the war, during which he served as



Frank C. Jones

an officer in the Ordnance Department of the United States Army, Mr. Jones entered the factory of the Okonite Company at Passaic, N. J. With his subsequent election as treasurer of the company he was transferred to its New York office. He then became vice-president and general manager, holding that position until his recent promotion to

the presidency. Mr. Jones, whose father, F. C. Jones, was at one time general manager of the Okonite factories and later a vice-president of that company, is also chairman of the Power Cable group of the National Electrical Manufacturers' Association.

**Charles C. Cluff**, manager of sales of the New York district of the **Carnegie Steel Company**, with headquarters at New York, retired on July 1 after more than half a century in the steel business. **James R. Mills**, manager of sales at Cleveland, Ohio, succeeds Mr. Cluff and **Francis C. Hardie**, assistant manager of sales of the Illinois Steel Company at Chicago, succeeds Mr. Mills at Cleveland. Mr. Cluff entered the steel business in 1881 with the Iowa Barb Wire Company (now the Allentown plant of the American Steel & Wire Company), where he remained until he went into business for himself in 1890. In 1895 he became general eastern agent of the Illinois Steel Company and with the organization of the United States Steel Corporation in 1901, he was appointed assistant manager of sales of both the Illinois Steel and the Carnegie Steel Companies. In 1910 Mr. Cluff became also manager of sales of the Tennessee Coal & Iron Company in the New York district.

**James R. Mills**, who succeeds Mr. Cluff as manager of sales in the New York district, has been manager of sales in the Cleveland district for the Carnegie Steel Company, the Illinois Steel Company and the Tennessee Coal & Iron Company for many years. Mr. Mills was born at Sewickley, Pa., and attended Allegheny College and Ohio State University, receiving his B.A. degree from the former institution. He has been with the Carnegie Steel Company since July 1, 1898, when he joined the staff of the Cleveland office as salesman. He later was manager of sales in that city and on March 1, 1905, he became assistant manager of sales of the St. Louis, Mo., district. In January, 1907, Mr. Mills was transferred to the New Orleans office as manager of sales and remained there until June, 1914, when he returned to the Cleveland office, also as manager of sales.

**Francis C. Hardie**, who succeeds Mr. Mills at Cleveland, has been assistant manager of sales of the Illinois Steel Company at Chicago. He was born at Evanston, Ill., and, after first attending the University of Illinois, received his B.A. degree at Dartmouth College in 1918. He entered the service of the Carnegie Steel Company in 1924 at the Duquesne, Pa., works. In June, 1925, he was transferred to the Cincinnati office as a salesman and in March, 1926, he was assigned to Indianapolis as resident salesman, where he remained until he was transferred to the Illinois Steel Company at Chicago, in April, 1929. He was appointed assistant manager of sales at Chicago on January 1, 1931.

#### New Officers of Illinois Steel Company

**George G. Thorp**, vice-president of the Illinois Steel Company, has been elected

president, to succeed **Eugene J. Buffington**, who retired on July 1 under the United States Steel Corporation's pension system. Mr. Thorp was born at Pittsburgh, Pa., on June 29, 1868, and was graduated from the University of Wisconsin in 1891. He began his career as engineer of tests of the Illinois Steel Company at Chicago in 1892 and was



George G. Thorp

appointed general superintendent of the Joliet Illinois Works in 1898. From 1901 until 1905 he constructed and operated the steel mills at Clairton, Pa., and in the latter year was elected vice-president of the Illinois Steel Company in charge of design, construction and operation of the Gary Steel Mills, Gary, Ind.

**Eugene J. Buffington** was born at Guyandotte, W. Va., on March 14, 1863, and graduated from Vanderbilt university in 1883. In 1884 he entered business as a manufacturer of wire nails, organizing the American Wire Nail Company, Covington, Ky., and occupying the position of treasurer. In 1889 the company was

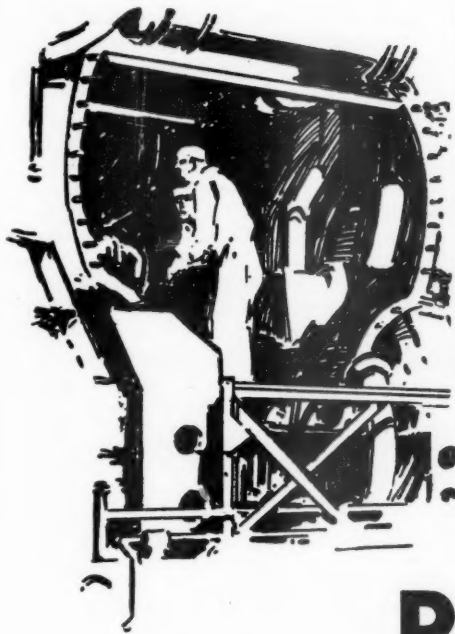


Eugene J. Buffington

moved to Anderson, Ind., where he remained until 1898, when he became secretary and treasurer of the American Steel & Wire Co., Chicago. On January 1, 1899, he became president of the Illinois Steel Company, which position he has held until his retirement.

**George Cook Kimball**, who has been elected vice-president of the Illinois Steel





## Prevents Expensive Boiler Repairs

THE use of HUNT-SPILLER *Air Furnace* GUN IRON in locomotive boiler Dry Pipe Fittings offers savings which will be welcomed by every railroad.

Many expensive repairs can be prevented by the application of dry pipe sleeves, elbows, stand pipes and throttle boxes made of this tough wearing material.

The uniformity of HUNT-SPILLER *Air Furnace* GUN IRON insures castings free from those foundry defects which are the cause of dangerous leaks. Resistance to high temperatures is also an important characteristic which will help you to prevent expensive dry pipe repairs.

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Cylinder Packing Rings  
Pistons or Piston Bull Rings  
Valve Bushings  
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Hub Liners  
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Parts Finished for  
Application

Dunbar Sectional Type  
Packing  
Duplex Sectional Type  
Packing  
(Duplex Springs for Above  
Sectional Packing)  
Cylinder Snap Rings  
Valve Rings All Shapes

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# HUNT-SPILLER GUN IRON

*Air Furnace*

Company, with headquarters at Chicago, to succeed Mr. Thorp was graduated from Harvard University in 1900. The following year he entered the steel indus-



George Cook Kimball

try in the engineering department of the American Tin Plate Company at Pittsburgh, Pa. In 1905 he was appointed chief engineer of the American Sheet & Tin Plate Company, and held that position until 1931 when he was elected a vice-president of that company.

## OBITUARY

**Paul W. Kohnen**, formerly secretary of the Railroad Supply Company, died at Chicago on June 27.

**William Rowan, Jr.**, for many years secretary and treasurer of the Morton Manufacturing Company, Muskegon Heights, Mich., died on June 13.

## Construction

**BOSTON & MAINE.**—This company has authorized the construction, at an approximate cost of \$27,000, of a culvert and fill, with necessary tidal gates, to replace an existing pile trestle (Bridge No. 123) at Revere, Mass.

**PUBLIC SERVICE COMMISSION OF NEW YORK.**—The New York Public Service Commission has approved estimates of cost for land to be acquired in connection with the elimination of various grade crossings of the Delaware & Hudson in Albany, N. Y., and of the Birdsell road and Main street crossings of the New York Central at Chappaqua, New Castle, N. Y. The commission has also approved specifications and cost estimates for the elimination of the Bullis and Blossum road crossings of the Pennsylvania, west of Spring Brook station, Elma, N. Y., and for the reconstruction of the bridge carrying a county highway over the tracks of the Boston & Albany in Claverack, N. Y. Proceedings for elimination of the River street crossing of the New York Central, Oriskany, N. Y., have been closed by the commission.

**TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS.**—The St. Louis, Mo., Board of Public Service will open bids on July 26 for the construction of the reinforced concrete piers, abutments and embankment for the South Valley approach to the railroad deck of the St. Louis Municipal bridge, including the southerly double-track connection between the eastern railroad approach to the bridge and the Illinois Transfer Railroad. Bids for the fabrication and erection of the structural steel for the South Valley approach will also be received on the same date.

## Financial

**ASHLEY, DREW & NORTHERN.—R.F.C. Loan.**—This company has applied for a loan of \$400,000 from the Reconstruction Finance Corporation to pay indebtedness to the Crossett Lumber Company.

**ATCHISON, TOPEKA & SANTA FE.—Passes Dividend.**—Directors of this company have passed the quarterly dividend due at this time on its common stock. Last quarter \$1.50 was paid and prior thereto, \$2.50.

**BOSTON & MAINE.—Bonds.**—This company has applied to the Interstate Commerce Commission for authority to issue \$10,000,000 of 6 per cent bonds to reimburse the treasury for capital expenditures, to be pledged as collateral for short-term notes.

**BOSTON & MAINE.—Operation and Abandonment.**—The Interstate Commerce Commission has authorized this company to operate under trackage rights over the Maine Central between Whitefield, N. H., and Fabyan, 15 miles, and between Waumbek Junction and Coos Junction, 11 miles, and to abandon operation over its own line between Wing Road and Base, 20 miles, and between Whitefield Junction and Lancaster, 12 miles.

**BUFFALO, UNION-CAROLINA.—R.F.C. Loan.**—The Interstate Commerce Commission has approved a loan of \$53,960 to this company from the Reconstruction Finance Corporation, on its application for \$100,000, to pay part of its short-term indebtedness to the Union Manufacturing & Power Company and for the purchase of material and supplies.

**CENTRAL VERMONT.—Bonds.**—The Interstate Commerce Commission has authorized this company to issue \$250,000 of first and general mortgage 5 per cent bonds, series B, to be pledged as collateral for securities issued under section 20a(9) of the interstate commerce act.

**CHICAGO & NORTH WESTERN.—Abandonment.**—The Interstate Commerce Commission has authorized this company to abandon a line extending from Mattoon, Wis., southward to Mattoon Junction, 9 miles.

**CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—R. F. C. Loan.**—The Interstate Commerce Commission on June 27 approved a loan of \$8,000,000 to this com-

pany from the Reconstruction Finance Corporation to provide for various maturities during the year on equipment trust certificates and other obligations and \$3,031,467 for additions and betterments, including grade separation work at Milwaukee, Wis., and track elevation at Evanston, Ill. The company had applied originally for \$10,996,331 but stated that it expected to obtain \$2,996,331 for interest requirements from the Railroad Credit Corporation. In addition to bonds of the Chicago, Milwaukee & St. Paul to be pledged as collateral the commission required that the company assign to the Finance Corporation its advances to the Chicago Union Station Company amounting to \$3,971,232.

**CHICAGO, ROCK ISLAND & PACIFIC.—R.F.C. Loan.**—The Interstate Commerce Commission has issued a modification of the report in which it authorized a loan of \$10,000,000 to this company from the Reconstruction Finance Corporation to authorize the use of \$250,000 of the amount to pay maturing equipment trust obligations instead of half its loan of \$500,000 from the First National Bank of Chicago.

**CINCINNATI UNION TERMINAL.—Securities.**—The Interstate Commerce Commission has authorized this company to procure the authentication and delivery of \$12,000,000 of its first mortgage series C 5 per cent bonds, to be guaranteed by the New York Central, the Pennsylvania, the Baltimore & Ohio, the Norfolk & Western, the Chesapeake & Ohio and the Cincinnati, New Orleans & Texas Pacific.

**CINCINNATI UNION TERMINAL COMPANY.—R.F.C. Loan.**—The Interstate Commerce Commission has approved a loan of \$10,398,925 from the Reconstruction Finance Corporation to this company, for the purpose of continuing construction work on the passenger terminal at Cincinnati, on its application for a loan of \$11,400,000. The commission held, however, that no funds should be provided from the loan for the payment of interest in the amount of \$1,001,175 accrued and to accrue on advances by the proprietary companies. A total of \$30,195,341 had been expended on the work to April 30, and the cost to complete it is estimated at \$13,795,511. The company is required to pledge as collateral for the loan such amount of its first mortgage 5 per cent series C bonds that the total shall at all times exceed the advances on the loan by \$1,000,000.

**COLORADO & SOUTHERN.—Control.**—The Interstate Commerce Commission has authorized the Fort Worth & Denver Northern to issue \$110,000 of capital stock to be sold for cash to defray construction costs. The Colorado & Southern will acquire this stock and operate the property under lease.

**GEORGIA & FLORIDA.—R.F.C. Loan.**—The Interstate Commerce Commission has approved an additional loan of \$83,500 to the receivers from the Reconstruction Finance Corporation to pay interest on receivers' certificates and interest and maturing principal on equipment trust





Locomotives now equipped with FIREBARS  
show startling operating and maintenance  
economies.

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Research Laboratory and General Office—DEPEW, N. Y.

CANADIAN WAUGH EQUIPMENT CO., LTD. MONTREAL, QUE.

certificates, but has again denied approval of a loan for the purpose of purchasing materials and supplies and retiring outstanding receivers' certificates. The receivers originally applied for a loan of \$1,000,000 and the commission on May 5 approved a loan of \$271,221 for specific purposes but said the evidence before it justified doubt as to whether this road can survive. The receivers then asked for further consideration but reduced the amount of the application to \$700,000, stating that the holders of the outstanding certificates had agreed to renew one-half, or \$300,000 of them. Engineers in the employ of the Reconstruction Finance Corporation have recently completed an inspection and traffic survey of the Georgia & Florida, a report of which was furnished to the commission. The commission says that "there is nothing in the report to indicate that the property, with a few exceptions, is in other than reasonably good condition for the traffic it is called upon to handle, or that its operations are being conducted on other than an economical basis," but it repeats its former statement about the prospects of the road and says "we are unable to alter our previous conclusions that only a comparatively small loan to these applicants is justified."

**GEORGIA, SOUTHWESTERN & GULF.—R.F.C. Loan Denied.**—The Interstate Commerce Commission has denied approval of this company's application for a loan of \$60,000 from the Reconstruction Finance Corporation, to pay taxes, interest and notes, on the ground that the prospective earning power and the security offered are not such as to afford reasonable assurance of ability to repay the loan.

**GREAT NORTHERN.—Omits Action on Dividend.**—Directors of this company meeting on June 24 failed to take action on the semi-annual dividend on its preferred stock, due at this time. Six months ago the disbursement was \$1 and a year ago, \$1.50. Prior thereto the semi-annual basis was \$2.50. The company has no common stock.

**HOBOKEN MANUFACTURERS'. — R.F.C. Loan.**—This company has applied for a loan of \$200,000 from the Reconstruction Finance Corporation, of which one-half is desired for a rearrangement of terminals and one-half to pay fixed charges.

**KANSAS CITY, KAW VALLEY & WESTERN.—R.F.C. Loan.**—The Interstate Commerce Commission has approved a loan of \$51,500 to this company from the Reconstruction Finance Corporation to pay past-due taxes, past-due open accounts, and short-term bank notes to release \$150,000 of its first mortgage bonds held as security therefor which were issued without the commission's approval. The approval is conditioned on the cancellation of the bonds and an application to the commission for authority to issue bonds to secure the loan. The company had originally applied for \$135,831, but reduced the amount asked in a supplemental application. Commissioner Mahaffie dissented.

**LEHIGH VALLEY.—Bonds.**—This company has applied to the Interstate Commerce Commission for authority to pledge \$2,800,000 additional of the general consolidated mortgage 5 per cent bonds held in its treasury as additional collateral for a loan from J. P. Morgan & Co.

**MISSOURI & NORTH ARKANSAS.—R.F.C. Loan.**—The receiver has filed with the Interstate Commerce Commission an amended application for a loan of \$575,000, having been advised by the commission that it could not see its way clear to approve the loan of \$1,250,000 originally applied for. The amended application is to provide for wages, taxes, interest, and 25 per cent of the \$700,000 of receiver's certificates outstanding. The docket on this application includes a letter from S. T. Bledsoe, vice-president and general counsel of the Atchison, Topeka & Santa Fe, in reply to one from the commission, in which he said he did not see how the Santa Fe directors would be justified in acquiring either the property or the securities of the M. & N. A.

**MISSOURI PACIFIC.—Acquisition.**—Examiner R. R. Molster, in a proposed report on hearing, has recommended that the Interstate Commerce Commission affirm its finding that the proposed acquisition by this company of control of the Northeast Oklahoma on the terms proposed would not be in the public interest. Referring to the Missouri Pacific's application for loans from the Reconstruction Finance Corporation amounting to \$23,250,000, he said that the only testimony as to its ability to finance the purchase price of \$1,047,740 for the securities of the short line is that the contract requires payment in cash, subject to set-offs for indebtedness of the Northeast Oklahoma to the Missouri Pacific.

**NEW YORK CENTRAL.—Bonds.**—The Interstate Commerce Commission has authorized this company to issue \$75,000,000 of refunding and improvement mortgage series C bonds, to be pledged as necessary for short term loans.

**NEW YORK CENTRAL.—R.F.C. Loan.**—The Interstate Commerce Commission on June 25 approved an additional loan of \$13,600,000 from the Reconstruction Finance Corporation to this company, to provide funds to pay a part of its interest charges, rent for leased road, and taxes, the requirements for which to August 1 amount to \$24,028,448. The commission had previously approved a loan of \$4,399,000 to pay a portion of the cost of the west side improvement work in New York, of which \$1,500,000 has been advanced by the Finance Corporation. As collateral for the new loan the company is required to pledge \$4,494,000 of its refunding and improvement mortgage 6 per cent bonds, Series B, and \$41,740,000 of refunding and improvement 5 per cent bonds, Series C, both issues maturing in 2013.

**NORFOLK & WESTERN.—Reduces Dividend.**—Directors of this company have reduced the annual dividend rate on its common stock from \$10 to \$8.

**OREGON - WASHINGTON.—Abandonment.**—This company has applied to the Interstate Commerce Commission for authority to abandon its line from Bell, Wash., to Amwaco, Idaho.

**PENNSYLVANIA.—Abandonment.**—The Interstate Commerce Commission has authorized this company and its subsidiary, the Western New York & Pennsylvania, to abandon a 3-mile portion of the latter's line extending into Carmona, Pa.

**PENNSYLVANIA.—Bonds.**—The Interstate Commerce Commission has authorized the Pennsylvania, Ohio & Detroit to issue \$701,000 of first and refunding mortgage series B bonds to be delivered to the parent company, which will guarantee them, in satisfaction of indebtedness.

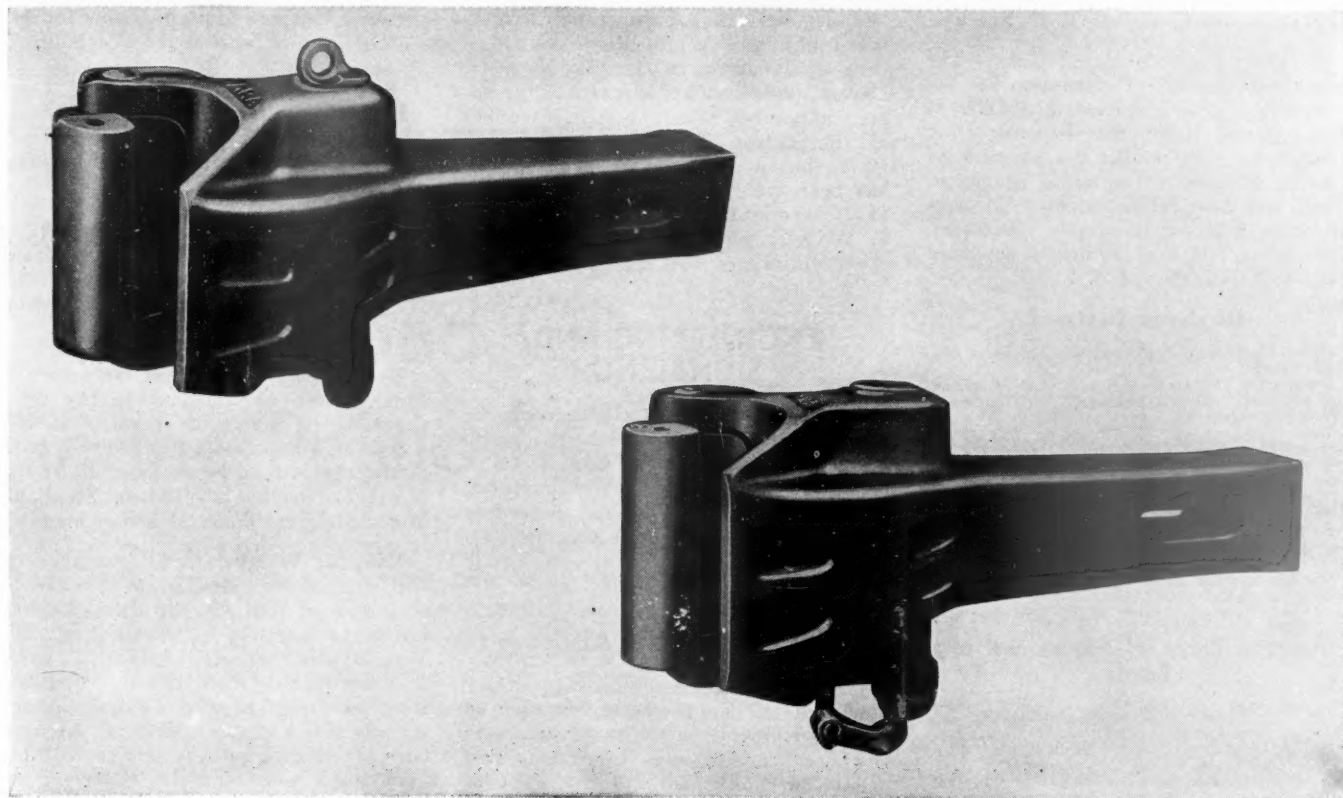
**ST. LOUIS-SAN FRANCISCO.—R. F. C. Loan.**—A supplemental application for a loan of \$3,390,086 from the Reconstruction Finance Corporation, to pay \$2,481,838 interest on prior lien bonds due July 1 and \$908,248 of taxes, was filed with the Interstate Commerce Commission and the corporation on June 28 after several conferences between officers of the company with the commissioners and representatives of the corporation regarding the company's July 1 requirements and the plan which the commission required it to submit for effecting a substantial reduction of its fixed charges. A few days earlier the company had filed an application for \$4,390,086, including \$1,000,000 for working capital, but later withdrew that item. With the supplemental application the company also reduced its previous statement of its requirements to \$9,364,808 by eliminating an item of \$5,974,722 for bank loans due July 1, which the banks have agreed to extend to a later date. It also stated that the plan for reducing interest charges would be presented to the commission for its formal approval to be promulgated about July 1 if approved. While it gave no details of the plan, the application revealed that a feature of it was an issue of prior mortgage bonds, to be secured by a lien on the company's properties and to be prior, as to the assenting bonds, to the outstanding prior lien and consolidated mortgage bonds of the company, by stating that it would agree to pledge \$3,390,000 of the new bonds as part of the collateral for the additional loan. It is reported that the plan contemplated issuing scrip for the interest on the prior lien and consolidated mortgage bonds. "Failure to obtain the loan applied for," the application said, "will make it impossible for the applicant to proceed to carry out such plan and will necessarily result in the immediate receivership of the applicant."

**SEABOARD AIR LINE.—Abandonment.**—The Interstate Commerce Commission has authorized this company and its receivers to abandon a line extending from Archer, Fla., southwesterly to Cedar Key, 41.5 miles.

**UNION PACIFIC.—Unification.**—The Interstate Commerce Commission has as-



# THE NEW A·R·A· STANDARD "E" COUPLER



## ROTARY OPERATION

**C**OUPLER OPERATION is easier and more effective when fitted with the bottom rotary mechanism.

The type "E" coupler may be furnished either for top operation or bottom rotary operation. When fitted for rotary operation the knuckle is unlocked and opened easily and certainly by the use of the operating rod

only and its anti-creep feature is positive.

An added advantage is found in the fact that the "E" coupler may be arranged for either type of operation by a change in actuating parts only.

The effectiveness and ease of the rotary operation is proved by the following comparison:

### POUNDS PULL TO OPERATE

Coupler	To Open Knuckle	Increase over Rotary type
Type "E" rotary operation . . .	29.4 lbs. average . . . . .	— —
Type "E" top operation . . . .	58.9 lbs. average . . . . .	100%
Type "D" bottom operation . . .	81.2 lbs. average . . . . .	176%
Type "D" top operation . . . .	98.0 lbs. average . . . . .	233%

Complete details of the new "E" coupler may be obtained from the makers on request.

• This is the third in a series of announcements regarding the new A. R. A. standard "E" coupler

Manufactured and Sold by

**AMERICAN STEEL FOUNDRIES • THE BUCKEYE STEEL CASTINGS CO.**  
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**NATIONAL MALLEABLE AND STEEL CASTINGS CO.**

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signed this company's application for authority to effect a unification of its system properties for hearing at Washington on July 20 before Examiner T. F. Sullivan.

**WESTERN PACIFIC.—R.F.C. Loan.**—The Interstate Commerce Commission has approved a further loan of \$2,264,000 to this company from the Reconstruction Finance Corporation for the payment of interest, principal of maturing equipment notes, and \$300,408 on account of construction work in northern California. The commission had previously approved loans of \$1,303,000 and \$799,000.

### Dividends Declared

Great Northern.—Preferred, semi-annually dividend omitted.

Pittsburgh, Bessemer & Lake Erie.—Common, 1½ per cent, payable October 1, to holders of record September 15.

Reading.—Common, 25c, payable August 11, to holders of record July 14; first preferred, 50c, quarterly, payable September 8, to holders of record August 18; second preferred, 50c, quarterly, payable October 13, to holders of record September 22.

Richmond, Fredericksburg & Potomac.—Voting, 2 per cent, semi-annually, non-voting, 2 per cent, semi-annually; dividend obligations, 2 per cent, semi-annually, all payable June 30, to holders of record June 20.

### Average Prices of Stocks and of Bonds

	June 28	Last week	Last year
Average price of 20 representative railway stocks..	11.44	13.99	72.92
Average price of 20 representative railway bonds..	49.51	51.61	91.22

## Railway Officers

### EXECUTIVE

**C. E. Perkins**, vice-president in charge of traffic of the Missouri Pacific, with headquarters at St. Louis, Mo., has had his jurisdiction extended over the Gulf Coast Lines, the International-Great Northern and the San Antonio, Uvalde & Gulf, all of which are units of the Missouri Pacific Lines.

### OPERATING

**J. A. Appleton**, general superintendent of the Lake division of the Pennsylvania, with headquarters at Cleveland, Ohio, has been appointed also acting superintendent of the Cleveland division, succeeding **J. C. Poffenberger**, who has been transferred to the Maryland division, with headquarters at Wilmington, Del. Mr. Poffenberger replaces **R. P. Russell**, who has been appointed superintendent of car service, with headquarters at Philadelphia, Pa., to succeed **E. T. Kennan**, deceased. These changes become effective on July 1.

**C. F. Dougherty**, superintendent of the Missouri division of the Missouri Pacific, with headquarters at Poplar Bluff, Mo., has had his jurisdiction ex-

tended to include the Memphis division, and **A. R. Taylor**, superintendent of the latter division, with headquarters at Wynne, Ark., has been transferred to the Joplin and White River divisions, with headquarters at Nevada, Mo. Mr. Taylor replaces **W. Wicker**, who has been appointed assistant superintendent of the Little Rock (Ark.) terminal, where he succeeds **M. F. Weeks**, who has been transferred to the Alexandria (La.) terminal. Mr. Weeks relieves **J. S. Walker**, who has been assigned to other duties.

### ENGINEERING AND SIGNALING

**F. H. Cook**, division engineer on the International-Great Northern, with headquarters at Palestine, Tex., has been promoted to assistant chief engineer, with the same headquarters, succeeding **T. S. Bond**, who has been appointed assistant engineer at San Antonio, Tex.

### MECHANICAL

**J. A. Sheedy**, superintendent of motive power of the Southwestern division of the Pennsylvania, with headquarters at Indianapolis, Ind., has been appointed master mechanic, with the same headquarters, succeeding **C. G. Brown, Jr.**

**George E. Smart**, chief of car equipment of the Canadian National, is retiring because of ill-health, and the title of **C. E. Brooks**, chief of motive power, has been changed to chief of motive power and car equipment. Mr. Brooks will have charge of car equipment.

**E. R. Hanna**, master mechanic of the Arkansas and Missouri divisions of the Missouri Pacific, with headquarters at Little Rock, Ark., has been relieved of the Missouri division and has had his jurisdiction extended over the Memphis division and the Union Railway of Memphis, Tenn. The position of master mechanic of the Memphis division and the Union Railway of Memphis, which has been held by **R. Smith**, with headquarters at Memphis, has been abolished. The jurisdiction of **W. C. Smith**, master mechanic of the Illinois division and the Missouri-Illinois Railroad, with headquarters at Dupon, Ill., has been extended to include the Missouri division.

### PURCHASES AND STORES

**H. M. Smith**, assistant general storekeeper of the Northern Pacific, has been promoted to general storekeeper, effective July 1, succeeding **Edwin J. Myers**, who is retiring after nearly 43 years of continuous service with this company. **C. A. Nichols**, traveling storekeeper, has been promoted to assistant general storekeeper to succeed Mr. Smith. The headquarters of Mr. Smith and Mr. Nichols will be as before at St. Paul, Minn.

### OBITUARY

**L. H. Geller**, general freight agent of the Erie, with headquarters at Chicago, died on June 26 enroute to Washington, D. C.

**E. L. Mountfort**, freight traffic manager of the Gulf, Mobile & Northern, with headquarters at Mobile, Ala., died at Fairplay, Colo., on June 25.

**W. G. McEwan**, superintendent of dining cars of the Louisville & Nashville, with headquarters at Louisville, Ky., died suddenly in that city on June 22.

**B. O. Johnson**, who, on December 1, 1931, retired as assistant to the vice-president in charge of operation of the Northern Pacific under the pension rules of the company, died on June 27, at the Northern Pacific hospital in St. Paul, Minn., after an illness of several months.

**Noel B. Wright**, traffic manager of the Central of Georgia, at Savannah, Ga., died in that city on June 23, following an operation for appendicitis. Mr. Wright was born on February 27, 1876, at Greensboro, Green County, Ga., and was educated in the Green County schools and business college at Atlanta, Ga. He entered railway service with the Memphis & Charleston (now part of the Southern), on August 24, 1896, as stenographer to the traveling freight agent. The following year he entered service with the Norfolk & Western as stenographer to the general agent at Atlanta, remaining in that position until



Noel B. Wright

October, 1898, when he became traveling freight agent on the same road. On December 1, 1905, he commenced service with the Central of Georgia as chief clerk to the general freight agent at Savannah, and in February, 1908, he was promoted to assistant general freight agent. In January, 1911, he became general freight agent and five years later he was promoted to assistant freight traffic manager. In 1928, he was appointed freight traffic manager, and in April, 1930, he became traffic manager, the position he held until his death.